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PART A
IONOSPHERIC DATA

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IONOSPHERIC DATA

CONTENTS

	<u>Page</u>
Symbols, Terminology, Conventions	2
Predicted and Observed Sunspot Numbers.	5
World-Wide Sources of Ionospheric Data.	5
Hourly Ionospheric Data at Washington, D. C.. . . .	8, 9, 17, 28
Tables of Ionospheric Data.	9
Graphs of Ionospheric Data.	28
Index of Tables and Graphs of Ionospheric Data in CRPL-145 (Part A)	52

SYMBOLS, TERMINOLOGY, CONVENTIONS

Beginning with data reported for January 1952, the symbols, terminology, and conventions for the determination of median values used in this report (CRPL-F series) conform as far as practicable to those adopted at the Sixth Meeting of the International Radio Consultative Committee (C.C.I.R.) in Geneva, 1951. Excerpts concerning symbols and terminology from Document No. 626-E of this Meeting are given on pages 2-7 of the report CRPL-F89, "Ionospheric Data," issued January 1952. Reprints of these pages are available upon request.

Beginning with data for January 1945, median values are published wherever possible. Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data exist.

The following conventions are used in determining the medians for hours when no measured values are given because of equipment limitations and ionospheric irregularities. Symbols used are those given in Document No. 626-E referred to above, plus an additional symbol, R: "Scaling of characteristic is influenced or prevented by absorption in the neighborhood of the critical frequency," (May 1955). Also, beginning with January 1956, additional meanings are assigned to T: A smoothed value which better fits the observations, replacing a doubtful or clearly inconsistent observed value; and to U: f_oF2 minus f_oF1 is 0.5 Mc or less (used with $(M3000)F2$).

a. For all ionospheric characteristics:

Values missing because of A, C, F, L, M, N, Q, R, S, or T are omitted from the median count.

b. For critical frequencies and virtual heights:

Values of f_oF2 (and f_oE near sunrise and sunset) missing because of E are counted as equal to or less than the lower limit of the recorder. Values of $h'F2$ (and $h'E$ near sunrise and sunset) missing for this reason are counted usually as equal to or greater than the median. Other characteristics missing because of E are omitted from the median count.

Values missing because of G are counted:

1. For f_oF2 , as equal to or less than f_oF1 .
2. For $h'F2$, as equal to or greater than the median.

The symbol W is included in the median count only when it replaces a height characteristic; the symbol D, only when it replaces a frequency characteristic.

Values missing for any other reason are omitted from the median count.

c. For MUF factor (M-factors):

Values missing because of G or W are counted as equal to or less than the median.

Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because of E or G (and B when applied to the daytime E region only) are counted as equal to or less than the median foE, or equal to or less than the lower frequency limit of the recorder.

At night B for fEs is counted on the low side when there is a numerical value of foF2; otherwise it is omitted from the median count.

Values of fEs missing for any other reason, and values of h'Es missing for any reason at all are omitted from the median count.

Beginning with data for November 1945, doubtful monthly median values for ionospheric observations at Washington, D. C., are indicated by parentheses, in accordance with the practice already in use for doubtful hourly values. The following are the conventions used to determine whether or not a median value is doubtful:

1. If only four values or less are available, the data are considered insufficient and no median value is computed.

2. For the F2 layer, if only five to nine values are available, the median is considered doubtful. The E and F1 layers are so regular in their characteristics that, as long as there are at least five values, the median is not considered doubtful.

3. For all layers, if more than half of the values used to compute the median are doubtful (either doubtful or interpolated), the median is considered doubtful.

The same conventions are used by the CRPL in computing the medians from tabulations of daily and hourly data for stations other than Washington, beginning with the tables in IRPL-F18.

The tables and graphs of ionospheric data are correct for the values reported to the CRPL, but, because of variations in practice

in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of the errors are due to:

- a. Differences in scaling records when spread echoes are present.
- b. Omission of values when f_oF_2 is less than or equal to f_oF_1 , leading to erroneously high values of monthly averages or median values.
- c. Omission of values when critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series report IRPL-F5.

Ordinarily, a blank space in the fEs column of a table is the result of the fact that a majority of the readings for the month are below the lower limit of the recorder or less than the corresponding values of f_oE . Blank spaces at the beginning and end of columns of $h'F_1$, f_oF_1 , $h'E$, and f_oE are usually the result of diurnal variation in these characteristics. Complete absence of medians of $h'F_1$ and f_oF_1 is usually the result of seasonal effects.

The dashed-line prediction curves of the graphs of ionospheric data are obtained from the predicted zero-muf contour charts of the CRPL-D series publications. The following points are worthy of note:

- a. Predictions for individual stations used to construct the charts may be more accurate than the values read from the charts since some smoothing of the contours is necessary to allow for the longitude effect within a zone. Thus, inasmuch as the predicted contours are for the center of each zone, part of the discrepancy between the predicted and observed values as given in the F series may be caused by the fact that the station is not centrally located within the zone.
- b. The final presentation of the predictions is dependent upon the latest available ionospheric and radio propagation data, as well as upon predicted sunspot number.
- c. There is no indication on the graphs of the relative reliability of the data; it is necessary to consult the tables for such information.

PREDICTED AND OBSERVED SUNSPOT NUMBERS

The following predicted smoothed 12-month running-average Zürich sunspot numbers were used in constructing the contour charts:

Month	Predicted Sunspot Number										
	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947
December		150	42	11	15	33	53	86	108	114	126
November		147	35	10	16	38	52	87	112	115	124
October		135	31	10	17	43	52	90	114	116	119
September		119	30	8	18	46	54	91	115	117	121
August		105	27	8	18	49	57	96	111	123	122
July		95	22	8	20	51	60	101	108	125	116
June		89	18	9	21	52	63	103	108	129	112
May		77	16	10	22	52	68	102	108	130	109
April		68	13	10	24	52	74	101	109	133	107
March		60	14	11	27	52	78	103	111	133	105
February	150*	53	14	12	29	51	82	103	113	133	90
January	150*	48	12	14	30	53	85	105	112	130	88

*This number is believed representative of solar activity at a maximum portion of the current sunspot cycle.

The latest available information follows concerning the corresponding observed Zürich numbers (some of which may be subject to minor change) beginning with the minimum of April 1954.

Observed Sunspot Number

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1954				3	4	4	5	7	8	8	9	12
1955	14	16	19	23	29	35	40	46	55	64	72	80
1956	88	97										

WORLD - WIDE SOURCES OF IONOSPHERIC DATA

The ionospheric data given here in tables 1 to 48 and figures 1 to 96 were assembled by the Central Radio Propagation Laboratory for analysis and correlation, incidental to CRPL prediction of radio propagation conditions. The data are median values unless otherwise indicated. The following are the sources of the data in this issue:

Republica Argentina, Ministerio de Marina:
Buenos Aires, Argentina
Decepcion I.

University of Graz:
Graz, Austria

Escola Politecnica, University of Sao Paulo:
Sao Paulo, Brazil

Defence Research Board, Canada:
Ottawa, Canada
Winnipeg, Canada

Radio Wave Research Laboratories, National Taiwan University, Taipei, Formosa, China:
Formosa, China

French National Center for Telecommunications Studies:
Djibouti, French Somaliland
Tananarive, Madagascar

National Laboratory of Radio-Electricity (French Ionospheric Bureau):
Casablanca, Morocco
Poitiers, France

The Royal Netherlands Meteorological Institute:
De Bilt, Holland

Central Institute of Meteorology, Budapest, Hungary:
Budapest, Hungary

Icelandic Post and Telegraph Administration:
Reykjavik, Iceland

Norwegian Defence Research Establishment, Kjeller per Lillestrom, Norway:
Oslo, Norway

Manila Observatory:
Baguio, P. I.

South African Council for Scientific and Industrial Research:
Nairobi, Kenya (East African Meteorological Department)

Research Institute of National Defence, Stockholm, Sweden:
Upsala, Sweden

Royal Board of Swedish Telegraphs, Radio Department, Stockholm,
Sweden:

Lulea, Sweden

United States Army Signal Corps:

Adak, Alaska

Ft. Monmouth, New Jersey

Okinawa I.

Thule, Greenland

White Sands, New Mexico

National Bureau of Standards (Central Radio Propagation Labor-
atory):

Anchorage, Alaska

Fairbanks, Alaska (Geophysical Institute of the University
of Alaska)

Huancayo, Peru (Instituto Geofisico de Huancayo)

Maui, Hawaii

Narsarssuak, Greenland

Panama Canal Zone

Puerto Rico, W. I.

Washington, D. C.

HOURLY IONOSPHERIC DATA AT WASHINGTON, D. C.

The data given in tables 49 through 59 follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given above under "Symbols, Terminology, Conventions." Beginning with September 1949, the data are taken at Ft. Belvoir, Virginia.

The interpretation of a cell is as follows: U F
32

The U is a weight meaning doubtful. Other weights are I, interpolated, D, greater than, and E, less than. Absence of a letter in the upper left position means full weight is given to the observation.

Symbols such as F above are given in the upper right position.

There should be no difficulty in the placing of the decimal point. For the time being, a final zero will be found in each value of foF1 and foE. Thus at a later date it will be possible to register more closely scaled values of these characteristics, whenever such are reported.

TABLES OF IONOSPHERIC DATA

9

Table 1

Washington, D. C. (38.7°N, 77.1°W)							
August 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	280	6.2					3.1 2.70
01	280	5.9					2.8 2.75
02	280	5.7					(3.7) 2.70
03	280	5.3					2.9 2.70
04	280	4.8					3.4 2.70
05	280	4.7					3.6 2.90
06	260	5.4	250	---	119	2.0	2.4 3.10
07	280	6.4	230	4.2	111	2.7	3.9 3.10
08	310	7.0	220	4.8	105	3.1	4.5 3.00
09	320	7.2	210	5.0	103	3.5	4.7 2.90
10	340	7.5	205	5.2	103	3.8	5.2 2.85
11	360	7.8	200	5.4	103	3.9	4.4 2.80
12	360	8.2	210	5.4	101	4.0	4.4 2.80
13	380	8.3	210	5.5	101	3.9	4.0 2.75
14	360	8.0	215	5.4	101	3.9	4.1 2.75
15	350	8.1	220	5.2	103	3.7	4.0 2.80
16	340	8.0	220	4.9	104	3.4	3.9 2.80
17	330	8.0	230	4.6	109	3.0	3.8 2.80
18	270	8.0	240	---	115	2.3	3.5 2.90
19	250	8.0					3.7 2.90
20	250	7.6					3.5 2.90
21	260	7.0					3.4 2.80
22	270	6.7					3.2 2.80
23	270	6.4					3.9 2.75

Time: 75.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 2

Narsarsuaq, Greenland (61.2°N, 45.4°W)							
July 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00							4.4 ----
01		---					3.7 ----
02		---					4.5 ----
03		(4.2)					3.8 (2.90)
04		(4.6)					4.5 (2.90)
05		5.2			119	2.5	4.5 (2.90)
06		5.2			113	2.8	4.4 3.00
07		5.8		(4.4)	111	3.2	2.90
08		5.8		4.7	109	3.3	2.85
09		5.7		4.8	109	3.5	2.70
10		6.0		(5.0)	105	(3.5)	2.75
11		6.0		5.0	109	(3.6)	2.70
12		6.2		5.2	107	(3.5)	2.65
13		6.2		5.0	109	(3.5)	2.60
14		6.2		5.0	109	3.5	2.65
15		6.3		5.0	109	3.5	2.70
16		6.2		4.6	110	3.3	2.70
17		5.8		4.5	111	3.1	2.70
18		6.0		(4.3)	111	3.0	2.90
19		5.7		(4.0)	117	2.8	2.90
20		(5.4)		---	121	2.7	3.8 (2.80)
21		---					3.8 ----
22		---					4.5 ----
23		---					4.2 ----

Time: 45.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 3

Oslo, Norway (60.0°N, 11.1°E)							
July 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	295	6.20					<1.6 2.60
01	300	6.20					2.5 2.60
02	300	5.90					2.7 2.60
03	305	5.55	305	---	110	1.25	1.7 2.70
04	(380)	5.45	270	3.15	105	1.80	2.4 2.70
05	375	5.85	250	3.60	105	2.30	2.6 2.70
06	405	5.75	240	4.00	105	2.65	3.4 2.70
07	400	6.15	230	4.40	100	2.95	4.2 2.70
08	400	6.20	225	4.70	100	3.20	4.2 2.70
09	400	6.45	210	4.90	100	3.40	4.9 2.70
10	390	6.60	210	5.00	100	3.45	4.8 2.70
11	400	6.70	220	5.10	100	3.50	4.8 2.70
12	365	6.75	210	5.20	100	3.60	4.2 2.70
13	400	6.70	210	5.25	100	3.60	4.0 2.70
14	410	6.55	210	5.20	100	3.55	3.8 2.70
15	395	6.60	210	5.10	100	3.50	3.8 2.70
16	375	6.60	225	4.90	105	3.35	3.8 2.75
17	350	6.65	225	4.70	105	3.15	3.6 2.75
18	(300)	6.90	245	4.30	105	2.90	4.1 2.85
19	300	6.85	245	---	110	2.55	4.0 2.90
20	290	6.70	255	---	115	2.15	2.9 2.90
21	265	6.60	280	---	---	---	<2.0 2.90
22	270	6.30					<1.7 2.70
23	290	6.40					<1.5 2.60

Time: 15.0°E.
Sweep: 0.7 Mc to 25.0 Mc in 5 minutes, automatic operation.

Table 4

Uppsala, Sweden (59.8°N, 17.6°E)							
July 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	290	5.9					2.4 2.7
01	300	5.7					3.0 2.7
02	295	5.6				E	2.8 2.7
03	300	5.6	300	2.70	---	1.50	2.8 2.8
04	340	5.6	250	3.30	120	1.90	4.1 2.7
05	340	5.7	240	3.90	110	2.35	4.6 2.8
06	365	6.0	230	4.30	110	2.75	5.6 2.7
07	370	6.4	230	4.50	105	3.00	5.5 2.8
08	385	6.4	220	4.90	105	3.20	5.7 2.8
09	395	6.6	220	5.00	100	3.40	5.7 2.7
10	380	6.8	210	5.10	100	3.50	5.7 2.7
11	380	6.9	210	5.20	100	3.50	4.8 2.7
12	390	6.9	210	5.20	100	3.60	5.2 2.7
13	390	6.8	210	5.30	100	3.50	4.6 2.7
14	365	6.7	215	5.15	100	3.50	5.5 2.8
15	380	6.7	220	5.10	105	3.40	4.2 2.7
16	350	6.7	220	5.00	105	3.25	4.3 2.8
17	330	6.8	235	4.60	110	3.00	4.3 2.9
18	310	6.8	240	4.30	110	2.70	4.3 2.9
19	290	7.0	250	(3.70)	115	2.30	4.6 2.9
20	260	6.8	260	(3.00)	130	1.80	3.4 2.9
21	260	6.8			---	E	2.8 2.9
22	270	6.7			---	E	2.3 2.8
23	280	6.6					2.2 2.7

Time: 15.0°E.
Sweep: 1.4 Mc to 17.0 Mc in 6 minutes, automatic operation.

Table 5

Adak, Alaska (51.9°N, 176.6°W)							
July 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	290	6.0					2.3 2.70
01	300	5.6					1.3 2.65
02	300	5.2					1.3 2.65
03	310	4.8					1.1 2.60
04	365	5.0	290	(2.9)	110	---	1.4 2.60
05	390	5.8	265	3.7	118	---	2.5 2.60
06	400	6.2	240	4.2	110	(2.7)	3.8 2.60
07	425	6.6	230	4.6	103	(3.2)	4.7 2.55
08	420	6.9	220	4.8	105	(3.5)	4.4 2.60
09	425	6.7	210	4.9	---	---	4.8 2.60
10	445	6.6	210	5.1	---	---	4.7 2.60
11	465	6.6	205	5.1	---	---	4.2 2.50
12	460	6.4	215	5.1	---	---	4.1 2.60
13	440	6.3	210	5.1	---	---	3.9 2.60
14	420	6.2	210	5.0	---	---	3.9 2.65
15	430	6.2	210	5.0	104	---	3.6 2.65
16	385	6.3	225	4.8	103	(3.4)	3.6 2.70
17	350	6.3	235	(4.6)	106	(3.0)	3.6 2.80
18	310	6.2	250	(4.2)	111	(2.7)	4.0 2.90
19	280	6.5	270	---	120	(2.1)	3.5 2.95
20	270	6.5			---	---	3.6 2.90
21	270	6.7					3.4 2.80
22	270	6.8					2.3 2.75
23	280	6.2					2.4 2.70

Time: 180.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 6

Graz, Austria (47.1°N, 15.5°E)							
July 1956							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	300	6.9					
01	300	6.7					
02	300	6.3					
03	300	5.8					
04	300	5.4					
05	270	6.0					
06	250	6.7	225	4.0			
07	320	7.0	220	4.8			4.6
08	320	7.0	215	4.9		3.7	4.7
09	350	7.4	210	5.1		3.8	5.2
10	345	7.8	200	5.2		3.9	5.0
11	350	7.9	200	5.3		---	4.6
12	350	7.9	200	5.3		4.0	4.1
13	340	7.9	210	5.3		3.9	4.5
14	350	7.7	200	5.3		3.9	4.4
15	340	7.6	215	5.1		3.8	4.5
16	320	7.5	210	5.0		3.5	4.1
17	300	7.4	230	5.0			4.2
18	285	7.7	240	4.1			4.0
19	260	8.1					4.0
20	270	8.0					4.5
21	275	7.6					5.0
22	290	7.2					4.5
23	300	7.1					

Time: 15.0°E.
Sweep: 2.5 Mc to 12.0 Mc in 2 minutes.

Table 7

Pt. Monmouth, New Jersey (40.3°N, 74.1°W)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	200	6.0					4.0	2.75
01	200	5.8					(3.6)	2.80
02	200	5.2					(3.9)	2.75
03	200	4.6					4.2	2.75
04	290	4.2					4.8	2.80
05	285	4.4					3.00	2.80
06	325	5.4	270	---	119	2.0	3.3	2.95
07	350	6.0	220	4.4	109	3.0	3.7	2.95
08	350	6.3	210	4.7	109	3.3	4.4	2.90
09	400	6.5	210	5.0	109	3.6	4.0	2.80
10	400	6.8	205	5.1	107	3.8	4.5	2.70
11	410	6.6	200	5.2	107	3.9	4.0	2.75
12	430	6.8	210	5.2	109	(3.9)	4.0	2.65
13	405	6.8	210	5.3	109	(3.9)	4.0	2.70
14	400	6.8	210	5.2	107	3.8	3.9	2.70
15	300	7.0	220	5.0	108	3.7	4.0	2.70
16	375	7.2	220	4.9	109	3.5	4.0	2.75
17	330	7.0	220	4.5	109	3.2	3.6	2.80
18	300	7.0	235	---	113	2.6	2.9	2.90
19	260	7.2	---	---	---	---	3.4	2.90
20	250	7.2					3.4	2.80
21	270	7.0					3.4	2.80
22	280	6.7					3.7	2.70
23	280	6.4					3.6	2.75

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 9

Okinawa I. (26.3°N, 127.8°E)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	8.8					3.2	2.60
01	290	8.8					3.8	2.75
02	270	8.2					3.2	2.80
03	260	7.4					3.2	2.80
04	250	7.1					3.0	2.80
05	260	6.5					3.2	2.90
06	260	6.9	265	---	(135)	(1.7)	3.5	3.08
07	240	7.5	235	---	111	(2.7)	4.4	3.20
08	260	7.6	220	---	109	(3.2)	5.7	3.05
09	330	7.7	215	---	109	(3.5)	6.6	2.80
10	370	8.0	215	---	109	(3.8)	6.2	2.70
11	390	8.9	210	(5.6)	109	(3.9)	6.2	2.60
12	390	9.8	210	(5.6)	109	(4.0)	5.6	2.60
13	370	10.8	220	(5.4)	111	(4.0)	5.7	2.65
14	360	11.0	225	(5.4)	111	(4.0)	6.0	2.70
15	360	11.3	215	(5.4)	111	(3.8)	6.0	2.65
16	340	11.5	225	---	111	(3.6)	5.6	2.75
17	320	11.4	230	---	111	(3.3)	5.7	2.80
18	300	11.5	240	---	111	(2.7)	5.7	2.85
19	260	10.3	260	---	---	---	5.2	2.85
20	270	9.5					4.9	2.70
21	290	9.4					3.1	2.55
22	310	9.0					3.8	2.55
23	310	8.7					3.0	2.60

Time: 135.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 11

Puerto Rico, W. I. (18.5°N, 67.2°W)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	9.0					3.1	2.80
01	260	8.9					4.0	2.95
02	250	8.1					2.9	2.95
03	250	7.3					2.4	2.85
04	250	7.1					3.0	2.90
05	260	6.8					2.6	2.90
06	280	6.3	---	---			2.8	2.90
07	250	7.0	240	---	111	2.5	3.00	2.90
08	290	8.0	220	4.0	109	3.1	3.7	2.95
09	330	8.6	220	5.1	107	3.4	4.2	2.80
10	360	9.2	220	5.5	109	3.8	4.1	2.65
11	370	10.1	210	5.5	107	4.0	4.0	2.65
12	370	10.8	210	5.5	109	4.0	4.6	2.65
13	360	11.0	220	5.5	109	4.0	5.0	2.70
14	350	11.2	220	5.4	109	4.0	4.3	2.70
15	350	11.0	215	5.3	109	3.8	4.6	2.75
16	330	10.8	220	5.0	109	3.5	4.5	2.80
17	300	10.6	230	4.7	109	3.2	4.6	2.85
18	290	9.9	240	---	115	2.5	3.9	2.85
19	260	9.6					3.2	2.75
20	270	9.4					3.4	2.75
21	280	9.4					3.0	2.75
22	290	9.3					2.7	2.75
23	280	9.3					3.9	2.80

Time: 60.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 8

White Sands, New Mexico (32.3°N, 106.5°W)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	<300	5.7					3.2	2.65
01	<290	5.8					4.5	2.70
02	<280	5.4					3.4	2.70
03	270	5.1					2.8	2.75
04	(260)	4.8					3.0	2.70
05	290	4.7					2.9	2.80
06	280	5.8	245	---	(116)	(2.3)	3.6	2.95
07	320	6.4	225	4.5	109	(3.0)	4.5	2.85
08	350	7.2	210	4.9	(105)	(3.3)	5.1	2.70
09	360	7.7	200	5.1	(105)	(3.5)	5.3	2.60
10	390	7.8	200	5.1	(105)	(3.7)	5.0	2.55
11	390	8.3	200	5.2	(105)	(3.8)	4.8	2.65
12	380	8.5	200	5.2	107	(4.0)	5.0	2.60
13	370	8.2	200	5.2	(109)	(3.8)	5.2	2.65
14	370	8.3	215	5.2	(107)	(3.8)	4.4	2.70
15	370	8.1	215	5.0	(106)	(3.6)	4.2	2.75
16	350	7.7	220	4.9	107	(3.5)	4.3	2.80
17	330	7.5	225	(4.6)	107	(3.0)	4.0	2.85
18	290	7.3	240	---	109	---	3.8	2.95
19	260	7.1	---	---			3.1	2.90
20	<250	6.8					3.9	2.85
21	250	6.4					3.8	2.85
22	<270	5.8					3.4	2.70
23	<280	5.6					4.0	2.70

Time: 105.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 10

Maui, Hawaii (20.8°N, 156.5°W)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	8.8					2.4	2.70
01	290	8.5					1.7	2.75
02	260	7.9					1.9	2.90
03	260	7.1					1.5	2.85
04	280	6.6					1.7	2.80
05	280	5.8					2.1	2.80
06	280	5.8	285	---	---	---	3.3	2.80
07	290	6.8	240	---	112	2.5	4.4	3.00
08	360	7.4	230	5.3	109	3.1	5.4	2.65
09	390	8.4	215	5.4	109	3.6	7.3	2.50
10	410	9.0	205	5.5	109	3.8	5.6	2.30
11	430	9.8	210	5.6	109	3.9	6.4	2.40
12	440	10.3	220	5.7	109	4.0	5.6	2.45
13	400	10.8	215	5.6	107	4.0	5.6	2.50
14	390	11.2	210	5.5	109	3.9	5.0	2.60
15	380	11.3	220	5.4	109	3.8	5.1	2.60
16	350	11.5	225	5.2	107	3.6	5.5	2.70
17	310	11.5	230	4.8	111	3.2	5.1	2.85
18	300	10.8	245	---	117	2.5	4.8	2.90
19	270	9.8					4.3	2.85
20	280	9.4					4.1	2.75
21	290	9.3					3.2	2.70
22	290	9.2					3.2	2.70
23	300	8.8					2.2	2.70

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 12

Panama Canal Zone (9.4°N, 79.9°W)

July 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	270	8.7					(3.0)	2.85
01	250	8.2					(2.2)	2.90
02	240	7.6					3.0	2.90
03	250	6.8						2.95
04	260	6.2					2.2	2.95
05	260	5.5					2.4	2.80
06	280	5.4	---	---	121	(1.4)	2.8	2.90
07	240	6.5	230	---	112	2.4	3.7	3.05
08	240	7.0	220	---	107	3.1	3.3	2.85
09	420	7.8	215	5.5	105	3.5	4.0	2.50
10	390	9.4	205	5.2	105	3.8	4.7	2.45
11	410	10.4	210	5.4	107	4.0	4.9	2.45
12	430	11.1	205	5.5	107	4.0	4.7	2.50
13	410	11.7	205	5.4	105	4.0	4.5	2.60
14	380	11.9	210	5.4	105	3.9	4.6	2.65
15	360	11.9	215	5.2	105	3.8	4.7	2.70
16	350	11.5	220	5.0	107	3.4	4.7	2.70
17	320	10.9	230	4.9	111	3.0	4.1	2.70
18	280	10.2	245	---	120	2.4	3.3	2.70
19	270	9.6					3.3	2.75
20	280	9.2					3.1	2.65
21	290	9.1					3.3	2.65
22	280	9.0					3.0	2.75
23	270	9.0					(3.5)	2.80

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 13

Reykjavik, Iceland (64.1°N, 21.8°W)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.2)					3.8	(2.55)
01		(4.3)					3.9	(2.65)
02		(4.4)					3.9	(2.65)
03	4.8						4.1	2.65
04	4.8				115		4.3	2.65
05	4.6		3.8	109	2.5		3.7	2.65
06	5.3		4.0	105	2.7			2.60
07	5.6		4.5	108	3.0			2.80
08	5.9		4.5	101	3.1			2.75
09	5.9		4.8	101	3.3			2.70
10	6.2		4.9	104	3.4			2.70
11	6.1		4.9	103	(3.5)			2.65
12	6.1		4.9	101	(3.5)			2.55
13	6.2		5.0	103	(3.5)			2.65
14	6.3		5.0	104	(3.5)			2.65
15	6.4		4.9	107	(3.5)			2.65
16	6.2		4.8	109	3.3			2.65
17	6.2		4.6	109	3.1			2.70
18	5.9		4.4	111	3.0	3.6		2.80
19	5.6		4.2	109	2.7	4.0		2.70
20	5.4					4.0		2.75
21	(5.1)					4.4		(2.80)
22	4.7					4.9		(2.70)
23	(4.6)					4.1		(2.65)

Time: 15.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 14

Narsarsuaq, Greenland (61.2°N, 45.4°W)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00							4.3	----
01							3.6	----
02							3.8	----
03							3.4	----
04		(4.1)					4.5	(2.85)
05		(4.8)					4.5	(2.85)
06		5.4			111	3.3	4.2	(2.85)
07		5.8		(4.4)	104	3.1		2.90
08		5.7		4.5	104	3.3		2.85
09		5.8		(4.7)	105	(3.3)		2.75
10		6.0		4.8	108	3.4		2.70
11		6.0		5.0	109	(3.5)		2.70
12		6.1		(5.0)	109	(3.5)		2.65
13		6.2		(5.0)	106	(3.5)		2.60
14		6.4		(4.9)	106	3.4		2.60
15		6.4		(4.8)	109	3.5		2.70
16		6.2		(4.8)	109	(3.3)		2.75
17		5.9		(4.5)	107	3.2		2.80
18		(5.8)		(4.3)	111	3.0	4.5	(2.80)
19		(5.4)		(3.9)	117	2.8	4.5	(2.90)
20		(4.6)			119	2.6	5.2	----
21							5.8	----
22		(4.4)					4.4	----
23							4.5	----

Time: 45.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 15

Oe Bilt, Holland (52.1°N, 5.2°E)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	295	6.5						2.5
01	295	6.2						2.5
02	280	5.0						2.6
03	295	5.5					E	2.0
04	320	5.8	270	3.1	120	2.0	2.1	2.7
05	360	6.0	230	3.8	110	2.4	3.2	2.7
06	370	6.3	225	4.5	100	2.8	3.7	2.7
07	355	6.8	225	4.8	100	3.2	4.3	2.0
08	340	7.1	225	4.9	100	3.5	4.2	2.8
09	330	7.4	210	5.1	100	3.7	4.1	2.9
10	360	7.2	215	5.2	100	3.9	4.1	2.0
11	360	7.4	210	5.3	100	3.9	4.3	2.7
12	360	7.4	220	5.3	100	3.9	4.0	2.8
13	360	7.1	215	5.3	100	3.8	3.9	2.8
14	370	7.2	220	5.2	100	3.7	4.0	2.8
15	375	7.1	210	5.1	100	3.6	4.2	2.0
16	350	7.0	220	5.0	100	3.4	3.8	2.8
17	320	7.2	235	4.6	100	3.0	3.8	2.9
18	205	7.3	250	4.0	105	2.6	4.2	2.8
19	270	7.8	250	3.2	125	2.2	3.4	2.9
20	265	7.5					3.3	2.9
21	260	7.4					2.1	2.8
22	275	7.0						2.7
23	290	6.8						2.6

Time: 0.0°.

Sweep: 1.4 Mc to 16.0 Mc in 40 seconds.

Table 16

Adak, Alaska (51.9°N, 176.6°W)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	6.4					1.2	2.70
01	300	5.9						2.60
02	310	5.4					1.4	2.55
03	340	5.0					1.3	2.55
04	395	5.2	290	(3.1)	114	(2.0)		2.50
05	430	5.9	260	3.7	120	(2.5)	3.2	2.45
06	420	6.4	250	4.1	115	(2.9)	4.0	2.50
07	410	6.7	235	4.3	111	(3.2)	4.4	2.50
08	420	6.5	235	4.6	109	(3.4)	4.8	2.55
09	450	6.2	220	4.8	109		4.8	2.60
10	460	6.0	220	4.9	(108)		4.8	2.50
11	465	6.2	210	5.0			4.8	2.55
12	470	6.4	220	5.0			4.2	2.55
13	460	6.4	220	5.0	109		3.9	2.60
14	450	6.2	220	5.0	109		3.8	2.60
15	430	6.2	220	4.9	(109)		3.3	2.65
16	395	6.2	230	4.8	111	(3.4)	3.6	2.70
17	380	6.2	240	(4.4)	111	(3.0)	4.4	2.75
18	340	6.3	260		117	(2.7)	4.3	2.80
19	300	6.6	280		123		4.4	2.85
20	280	6.8					3.5	2.85
21	270	7.1					2.8	2.80
22	270	7.2					2.6	2.70
23	280	6.8					1.9	2.70

Time: 180.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 17

Formosa, China (25.0°N, 121.5°E)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	10.6					2.9	2.8
01	300	8.8					2.8	2.8
02	280	8.6					2.5	2.8
03	(280)	(8.0)					(2.2)	----
04	(280)	(7.5)					(2.4)	(3.0)
05	(300)	>6.4					(2.2)	----
06	(260)	(7.9)					(3.3)	(2.8)
07	(250)	(7.8)					----	----
08	(200)	8.3	230	(4.9)	110	3.4	5.0	2.8
09	(330)	8.6	220	5.2	110	3.6	5.7	2.7
10	380	9.2	220	5.7	110	3.9	6.0	2.5
11	400	10.2		5.7			7.1	2.5
12	380	11.3		5.6			6.0	2.6
13	380	12.1		5.7			5.0	2.6
14	360	12.7	220	5.6			5.8	2.7
15	350	>13.8	230	5.4			4.7	2.8
16	320	14.2	230	5.1			5.0	2.8
17	310	13.5					5.4	2.9
18	280	12.6					4.1	3.0
19	280	11.7					4.1	2.95
20	300	11.3					3.3	2.7
21	320	9.6					2.8	2.6
22	320	8.8					2.7	2.6
23	320	10.2					3.4	2.65

Time: 120.0°E.

Sweep: 1.1 Mc to 19.5 Mc in 15 minutes, manual operation.

Table 18

Maui, Hawaii (20.8°N, 156.5°W)

June 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	8.6					2.4	2.75
01	280	8.4					3.4	2.80
02	280	7.8					3.5	2.70
03	280	7.4					3.4	2.75
04	280	7.0					2.8	2.75
05	300	6.3					2.4	2.70
06	280	6.0	280		130	1.8	2.8	2.65
07	290	7.0	235		116	2.6	5.0	2.75
08	360	7.8	230	4.8	109	3.2	5.6	2.40
09	430	8.8	215	5.3	109	3.5	7.2	2.30
10	400	9.7	210	5.6	109	3.7	6.6	2.35
11	430	10.3	210	5.7	109	3.9	6.9	2.40
12	410	11.0	215	5.6	109	4.0	6.2	2.50
13	380	11.6	215	5.5	109	4.0	6.6	2.60
14	390	11.8	220	5.5	109	3.9	5.4	2.60
15	360	12.3	220	5.4	109	3.8	5.5	2.70
16	340	12.2	230	5.2	111	3.5	5.0	2.75
17	310	11.9	240	(5.0)	111	3.1	4.6	2.85
18	290	11.6	250		119	2.5	4.4	2.90
19	270	10.7					4.4	2.90
20	280	9.6					4.6	2.75
21	290	9.2					4.9	2.60
22	300	9.2					3.8	2.70
23	300	8.8					3.6	2.70

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 19

Puerto Rico, W. I. (18.5°N, 67.2°W)								June 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	280	9.2					3.2	2.85
01	260	9.1					2.8	2.95
02	260	8.4					2.6	2.90
03	270	7.4					2.8	2.85
04	270	7.4					(2.4)	2.90
05	260	7.0					(3.0)	2.90
06	260	7.0	---	---	---	---	---	2.95
07	270	7.8	240	4.0	111	2.5	3.2	3.00
08	300	8.2	230	4.6	109	3.0	3.7	2.80
09	310	8.5	215	5.0	109	3.4	4.6	2.65
10	370	9.4	210	5.5	109	3.6	4.4	2.65
11	370	10.1	220	5.5	109	3.8	4.2	2.60
12	370	11.0	210	5.5	109	4.0	4.4	2.60
13	350	11.5	220	5.4	109	4.0	4.0	2.70
14	350	11.3	220	5.5	111	3.9	4.1	2.75
15	345	11.0	220	5.2	109	3.7	4.2	2.75
16	330	11.0	230	5.0	111	3.5	4.6	2.80
17	320	10.4	235	4.8	115	<3.1	4.8	2.80
18	295	10.1	250	---	119	2.4	3.8	2.80
19	275	9.7					3.9	2.80
20	280	9.6					3.8	2.80
21	290	9.4					3.4	2.75
22	285	9.4					2.8	2.75
23	290	9.1					3.2	2.75

Time: 60.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 21

Huancayo, Peru (12.0°S, 75.3°W)								June 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	7.0						3.10
01	240	6.9						3.15
02	230	6.2						3.15
03	240	5.9						3.15
04	250	4.9						3.15
05	260	4.3						3.10
06	280	4.2						2.90
07	250	7.0			119	2.2	6.0	3.00
08	---	9.0	230	---	111	2.8	9.6	2.80
09	---	9.6	220	---	109	---	10.6	2.60
10	---	9.6	210	---	107	---	11.7	2.55
11	---	9.5	200	---	107	---	11.4	2.45
12	---	9.6	200	---	109	---	11.8	2.40
13	---	9.6	210	---	109	---	12.0	2.35
14	---	9.6	200	---	109	---	11.6	2.30
15	---	9.6	215	---	109	---	10.8	2.35
16	240	9.6	230	---	109	---	9.0	2.35
17	260	9.0			115	---	7.4	2.40
18	290	8.7					2.40	2.40
19	340	7.6					2.35	2.35
20	310	7.8					2.45	2.45
21	280	7.8					2.9	2.70
22	250	7.6					2.90	2.90
23	230	7.3						3.05

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 23

Reykjavik, Iceland (64.1°N, 21.8°W)								May 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(3.7)					4.2	(2.50)
01		---					4.0	---
02		(4.3)					4.5	---
03		(4.4)					4.6	(2.60)
04		(4.8)					4.1	(2.60)
05	5.2		---	---	---	---	3.5	2.80
06	5.5		---	---	111	2.5		2.85
07	5.6		---	---	111	2.8		2.80
08	5.9		4.5	111	(3.0)			2.90
09	5.9		4.6	111	(3.1)			2.75
10	6.2		4.7	109	3.3			2.80
11	6.0		4.9	109	(3.5)			2.65
12	6.6		4.9	109	(3.5)			2.60
13	6.5		4.8	111	(3.5)			2.65
14	6.4		4.8	109	(3.4)			2.65
15	6.8		4.8	109	3.4			2.75
16	6.0		4.6	111	3.2			2.80
17	6.6		---	---	110	3.0		2.90
18	6.4		---	---	114	(2.8)	3.7	2.90
19	5.8		---	---	123	2.6	3.2	2.90
20	5.4		---	---	131	---	3.4	2.80
21	(5.5)		---	---	---	---	3.6	(2.75)
22	---		---	---	---	---	4.5	---
23	---		---	---	---	---	4.9	---

Time: 15.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 20

Panama Canal Zone (9.4°N, 79.9°W)								June 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	9.2					1.8	2.85
01	265	8.7					1.9	2.80
02	265	8.2					2.4	2.85
03	265	7.6					1.8	2.90
04	255	6.8					3.1	2.90
05	245	6.6					3.2	3.00
06	270	6.0					4.1	2.85
07	240	6.7	230	---	115	2.5	4.2	3.05
08	300	7.5	220	---	109	3.1	3.9	2.75
09	340	8.6	210	(5.4)	109	3.5	4.2	2.45
10	385	9.6	<215	5.5	109	3.7	5.0	2.35
11	430	10.1	210	5.6	109	3.9	5.0	2.40
12	410	11.0	210	5.6	109	4.0	5.2	2.45
13	390	11.6	210	5.5	109	4.0	5.1	2.55
14	390	12.0	215	5.4	109	3.9	4.8	2.60
15	365	12.0	215	5.3	109	3.7	5.2	2.65
16	360	11.8	215	5.0	109	3.3	4.8	2.60
17	335	11.6	230	---	111	(2.8)	4.2	2.70
18	280	10.8	250	---	122	(2.2)	3.7	2.70
19	275	(10.2)					3.6	(2.60)
20	300	9.6					2.8	2.60
21	290	9.8					2.4	2.65
22	280	9.6					2.0	2.75
23	270	9.8					2.4	2.80

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 22

Fairbanks, Alaska (64.9°N, 147.8°W)								May 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(4.8)					4.8	(2.80)
01		(4.6)					4.4	(2.80)
02		(5.3)					4.0	(2.80)
03		(5.3)					4.3	(2.75)
04		(5.4)			116	---	4.3	(2.70)
05		(5.9)			117	(2.0)	4.3	(2.70)
06		(6.2)			(3.8)	111	2.3	4.3
07		(6.1)			(4.0)	109	(2.6)	4.4
08		(6.2)			(4.2)	105	(2.8)	5.0
09		(6.0)			(4.4)	103	(3.1)	3.2
10		5.6			(4.5)	103	3.2	(2.60)
11		5.9			(4.6)	105	(3.3)	2.55
12		5.8			(4.6)	103	(3.3)	2.60
13		5.8			(4.8)	105	(3.4)	2.60
14		(5.9)			(4.8)	105	(3.3)	(2.60)
15		(5.9)			(4.7)	108	(3.2)	(2.65)
16		(6.0)			(4.7)	109	(3.2)	(2.65)
17		(5.9)			(4.5)	109	(2.9)	(2.70)
18		(5.7)			(4.2)	111	(2.8)	2.9
19		(5.8)			---	111	(2.5)	3.2
20		(6.0)			---	113	2.1	3.0
21		(5.6)			---	125	---	3.2
22		(4.8)			---	---	---	3.4
23		(4.4)			---	---	---	3.4

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 24

Anchorage, Alaska (61.2°N, 149.9°W)								May 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.6					2.5	2.55
01		4.5					1.9	2.60
02		(4.4)					1.4	(2.50)
03		4.8					1.2	2.60
04		5.1			---	---	---	2.55
05		5.6			3.4	127	---	2.55
06		5.6			3.6	125	2.2	2.55
07		5.6			3.9	119	(2.6)	2.50
08		6.0			4.2	113	(2.9)	2.45
09		6.0			4.3	111	(3.0)	2.45
10		6.0			4.5	111	(3.1)	2.50
11		5.0			4.6	109	(3.2)	2.55
12		5.8			4.7	110	3.4	2.50
13		5.8			4.8	108	3.4	2.50
14		5.6			4.8	109	3.4	2.50
15		5.8			4.8	109	(3.2)	2.55
16		6.0			4.7	111	(3.0)	2.60
17		6.0			4.4	113	(2.8)	2.70
18		6.0			(4.0)	113	(2.5)	2.75
19		6.0			---	121	(2.2)	2.5
20		5.8			---	133	(1.8)	2.3
21		5.0			---	---	---	1.9
22		5.9			---	---	---	2.5
23		4.9			---	---	---	1.2

Time: 150.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 25

Ottawa, Canada (45.4°N, 75.9°W)

May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.4					<1.6	2.7
01		4.9					<1.6	2.7
02		4.4					<1.7	2.7
03		4.2					<1.7	2.7
04		4.0					<1.6	2.8
05		4.5			130	2.0		2.9
06		5.3		4.0	120	2.7		3.0
07		6.2		4.4	110	3.0		3.0
08		6.6		4.9	110	3.4		2.9
09		6.9		5.0	110	3.6		2.9
10		6.8		5.0	110	3.9		2.8
11		6.8		5.1	110	4.0		2.6
12		6.9		5.2	105	4.0		2.6
13		7.0		5.1	110	3.9		2.7
14		6.9		5.2	110	3.8		2.7
15		7.0		5.1	105	3.8		2.8
16		7.2		4.9	105	3.5		2.8
17		7.8		4.7	110	3.0		2.8
18		7.6		4.0	110	2.7		2.9
19		7.8			125	2.0		2.9
20		7.9					<1.7	2.9
21		7.1					<1.6	2.8
22		6.7					<1.7	2.8
23		6.0					<1.6	2.8

Time: 75.0°W.

Sweep: 1.0 Mc to 15.0 Mc in 15 seconds.

Table 26

Baguio, P. I. (16.4°N, 120.6°E)

May 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	260	12.2						3.00
01	240	11.5						3.20
02	220	9.6						3.15
03	230	8.3						3.00
04	230	7.3						2.90
05	230	6.0					2.2	2.95
06	250	7.5			123	2.0	4.2	3.00
07	230	9.0			111	2.9	7.2	2.90
08	230	10.1	220		111	3.2	8.0	2.75
09	220	10.5	210		111		8.0	2.45
10		11.4	210		111	3.9	7.2	2.40
11		11.5	205		111	(4.0)	6.8	2.40
12		12.5	205		111	(4.0)	6.8	2.35
13		12.6	205		111	(4.0)	4.8	2.40
14		12.7	210		111	(3.8)	5.3	2.40
15		12.8	215		111	(3.6)	6.2	2.40
16	230	12.8	225		109	3.2	5.4	2.40
17	240	12.7			111	2.7	4.0	2.50
18	270	12.6					4.4	2.50
19	320	11.8					4.0	2.40
20	350	10.9					2.7	2.40
21	340	11.0					2.6	2.50
22	310	11.3					2.5	2.60
23	300	12.0						2.75

Time: 120.0°E.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 27

Thule, Greenland (77.0°N, 69.0°W)

April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		5.5						(2.70)
01		5.2						2.65
02		5.5						(2.70)
03		5.0						(2.70)
04		4.9			(121)	(2.1)		(2.80)
05		5.4		3.5	118	(2.2)		(2.80)
06		5.4		3.7	117	2.4		(2.70)
07		5.9		3.8	115	2.6		(2.70)
08		5.8		4.0	113	2.7		2.60
09		5.9		4.2	111	2.8		(2.70)
10		5.8		4.1	111	2.9		(2.70)
11		6.0		4.4	109	2.8		2.75
12		5.8		4.4	110	3.0		2.70
13		5.8		4.2	111	2.8		2.70
14		6.1		4.2	111	2.9		(2.60)
15		6.3		4.1	113	2.0		(2.65)
16		6.2		4.0	115	2.6		2.70
17		6.0		3.8	117	2.4		2.65
18		6.1			(119)	2.3		(2.70)
19		6.0			119	2.2		(2.70)
20		6.2				(2.0)		2.75
21		5.7				(1.0)		(2.70)
22		5.8						(2.65)
23		5.5						2.65

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 28

Reykjavik, Iceland (64.1°N, 21.8°W)

April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00							4.0	----
01							4.2	----
02							4.2	----
03							3.8	----
04		(4.2)					3.6	(2.60)
05		4.6					3.5	2.75
06		5.0						2.90
07		5.5			115	(2.7)		2.85
08		6.1			111	2.9		2.90
09		6.4		4.5	109	(3.1)		2.85
10		6.6		4.6	110	3.2		2.70
11		6.8		5.0	111	3.3		2.70
12		7.0		5.0	107	3.5		2.65
13		7.2		5.0	107	3.3		2.70
14		7.0		4.8	109	3.3		2.75
15		7.0		(4.5)	109	3.3		2.70
16		7.0		(4.4)	111	3.1		2.80
17		6.4			113	2.8		2.80
18		(6.4)			111	2.6	3.6	(2.90)
19		(6.0)					3.6	(2.90)
20		(5.7)					4.0	(2.80)
21		(4.9)					3.7	(2.65)
22							3.7	----
23							3.5	----

Time: 15.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 29

De Bilt, Holland (52.1°N, 5.2°E)

April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	300	5.8						2.0
01	300	5.4						2.0
02	310	5.2						2.0
03	300	4.6						2.0
04	300	4.4						2.0
05	200	4.9			140	1.8		2.4
06	250	6.0	250		110	2.4		2.7
07	260	6.6	230	4.2	105	2.8		2.6
08	290	6.8	230	4.7	100	3.1		2.6
09	320	7.2	220	4.8	100	3.4		2.5
10	300	7.6	220	5.1	100	3.5		2.5
11	295	8.2	220	5.0	100	3.6		2.5
12	300	0.5	215	5.2	100	3.6		2.5
13	300	8.8	220	5.4	100	3.6		2.5
14	305	8.8	220	4.0	100	3.5		2.5
15	270	8.6	230	4.2	105	3.2		2.6
16	270	8.0	230	4.4	105	3.0		2.6
17	250	8.0	240		110	2.6		2.6
18	260	8.4			120	2.1		2.7
19	250	8.0						2.0
20	250	7.2						2.6
21	260	6.9						2.4
22	280	6.2						2.3
23	300	5.0						2.1

Time: 0.0°.

Sweep: 0.8 Mc to 20.0 Mc in 20 seconds.

Table 30

Buenos Aires, Argentina (34.5°S, 58.5°W)

April 1956

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	9.2						2.7
01	300	0.0						2.65
02	280	7.0						2.05
03	280	6.5						2.0
04	260	5.2						2.6
05	320	4.0						2.6
06	310	5.4						2.8
07	240	8.4						3.1
08	230	10.0						3.1
09	260	12.1	230					3.0
10	260	13.0	230					2.9
11	280	14.0	230					2.05
12	200	14.4	230					2.0
13	300	14.9	220					2.8
14	300	>15.1	230					2.8
15	280	>15.5	240					2.9
16	250	15.5	250					3.0
17	230	14.9					3.0	3.0
18	220	14.0						3.0
19	240	13.4						2.9
20	240	14.0						2.9
21	240	12.3						2.9
22	270	10.1						2.8
23	280	9.6						2.8

Time: 60.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 31

Deception I. (63.0°S, 60.7°W)								April 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	360	4.1					3.3	2.8
01	350	4.0					3.3	2.8
02	<380	3.8					3.3	2.8
03	<390	3.4					3.3	2.8
04	360	3.4					3.3	2.8
05	350	3.2					3.3	2.8
06	340	3.1					3.3	2.8
07	290	4.0					3.2	3.0
08	260	5.2					3.3	3.4
09	230	7.2					3.3	3.6
10	230	9.6					3.4	3.6
11	220	10.0					3.4	3.6
12	230	11.1					3.4	3.6
13	230	11.6					3.4	3.6
14	230	11.0					3.4	3.6
15	230	10.0					3.3	3.7
16	220	9.8					3.3	3.7
17	230	9.6					3.4	3.6
18	230	9.4					3.3	3.6
19	220	7.9					3.3	3.7
20	230	6.3					3.3	3.5
21	240	5.8					3.3	3.4
22	300	4.6					3.3	3.2
23	340	4.1					3.3	2.9

Time: 60.0°W.

Sweep: 1.5 Mc to 16.0 Mc in 15 minutes, manual operation.

Table 32

Thule, Greenland (77.0°N, 69.0°W)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		(5.5)						(2.65)
01		(5.4)						(2.75)
02		(5.6)						(2.60)
03		(4.7)						(2.70)
04		(5.8)						2.65
05		5.3						(2.90)
06		5.2					1.8	(2.85)
07		5.7			124	2.1		(2.90)
08		5.6			121	2.3		(2.90)
09		(6.2)	3.3	121	2.3			(2.90)
10		6.0	(4.0)	120	2.5			(2.80)
11		6.3	4.0	119	2.5			2.80
12		6.0	4.0	117	2.5			(2.90)
13		6.2	4.0	119	2.5			(2.80)
14		6.2	(3.8)	117	(2.5)			(2.85)
15		(6.4)	(3.7)	120	2.3			(2.85)
16		5.8		121	(2.2)			(2.90)
17		7.0		121	2.0			(2.80)
18		(7.2)			1.8			(2.70)
19		(6.8)						(2.80)
20		(7.0)						(2.70)
21		(5.9)						(2.70)
22		(5.5)						(2.75)
23		(5.2)						(2.70)

Time: 75.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 13.5 seconds.

Table 33

Reykjavik, Iceland (64.1°N, 21.8°W)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	---						4.1	---
01	---						3.6	---
02	---						3.6	---
03	---						4.1	---
04	(4.2)						4.1	---
05	(4.2)						3.8	(2.60)
06	(4.1)							(2.85)
07	4.9				---	---	3.00	
08	5.8				---	---	3.10	
09	6.2		---	118	2.7		3.10	
10	7.0		---	111	(2.8)		3.00	
11	7.6		---	111	(3.0)		3.00	
12	8.1		---	111	(3.1)		3.00	
13	8.3		---	111	(3.1)		3.00	
14	8.5		4.5	110	(3.0)		3.00	
15	8.4		---	111	(3.0)		3.00	
16	(7.2)		---	114	(2.7)		(3.00)	
17	(6.9)		---	---	---		(3.00)	
18	(5.9)		---	---	---		(3.10)	
19	(5.6)		---	---	---		(3.00)	
20	(4.7)						3.4	(2.90)
21	(4.9)						3.9	(2.65)
22	(4.8)						3.8	---
23	(4.7)						3.7	(2.65)

Time: 15.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 16.2 seconds.

Table 34

De Bilt, Holland (52.1°N, 5.2°E)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	310	4.7						2.25
01	305	4.6						2.35
02	300	4.5						2.4
03	300	4.1						2.3
04	295	(3.7)						2.4
05	280	(3.5)						2.5
06	270	4.7						2.9
07	240	6.6	250	3.1	110	2.3		3.1
08	230	7.4	230	3.9	110	2.8	2.5	3.0
09	250	9.2	225	4.3	105	3.1	2.9	2.9
10	250	9.2	225	4.6	105	3.3	2.9	2.9
11	270	10.0	220	5.0	105	3.4		2.9
12	255	10.5	225	4.9	105	3.5		2.8
13	255	10.4	225	4.6	105	3.4		2.85
14	250	10.5	225	4.3	105	3.3		2.85
15	245	10.0	230	4.0	105	2.9		2.8
16	240	9.7	235	3.6	110	2.7		2.9
17	230	9.4			120	2.1		2.9
18	230	8.6						3.0
19	230	7.8						2.9
20	230	7.0						2.8
21	260	6.0						2.6
22	280	5.6						2.5
23	310	5.0						2.2

Time: 0.0°.

Sweep: 0.8 Mc to 20.0 Mc in 20 seconds.

Table 35

Winnipeg, Canada (49.9°N, 97.4°W)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.4					<1.8	(2.7)
01		4.2					<2.5	(2.6)
02		4.1					<1.6	(2.5)
03		3.9					2.7	(2.6)
04		3.9					<1.6	(2.55)
05		3.8					<1.6	---
06		3.9					<1.6	(2.75)
07		5.0			---	---	2.0	2.95
08		6.2			120	2.5	2.9	
09		7.0			115	3.0	2.9	
10		7.8			115	3.2	2.9	
11		8.7		4.7	110	3.4	2.85	
12		9.0		4.8	110	3.4	2.75	
13		9.3		5.0	110	3.5	2.65	
14		9.8		---	110	3.4	2.7	
15		10.0		---	115	3.2	2.7	
16		10.0			120	3.0	2.7	
17		10.0			120	2.7	2.8	
18		9.1			130	2.1	2.9	
19		8.0			---	---	<1.6	2.9
20		7.0			---	---	<1.6	2.9
21		5.9			---	---	<1.7	2.85
22		5.0					<1.7	2.0
23		4.8					<2.0	2.8

Time: 90.0°W.

Sweep: 1.0 Mc to 25.0 Mc in 15 seconds.

Table 36

Budapest, Hungary (47.6°N, 19.0°E)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		4.8						
01		4.6						
02		4.4						
03		4.4						
04		3.9						
05		5.1					2.3	
06		7.0					2.5	
07		8.6					2.9	
08		9.8					3.2	3.2
09		10.4					3.3	
10		11.0					3.4	
11		11.0					3.5	
12		10.8					3.4	
13		10.6					3.4	
14		10.6					3.2	
15		10.2					2.9	
16		9.8					2.4	2.5
17		9.0					---	
18		8.2						
19		6.1						
20		5.8						
21		5.4						
22		5.1						
23		5.1						

Time: 0.0°.

Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 37

Nairobi, Kenya (1.3°S, 36.8°E)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	210	>14.6						(3.2)
01	210	11.5						3.1
02	230	9.5						2.9
03	240	>9.0						2.9
04	230	0.6						3.1
05	220	7.7					2.1	3.2
06	220	5.5					2.0	3.2
07	250	7.1	---	---	---	2.1	3.0	3.2
08	250	10.4	240	---	100	3.0		3.1
09	260	11.8	230	---	100	3.5		2.9
10	270	12.4	210	5.4	100	3.8		2.7
11	290	13.4	200	5.5	100	4.0		2.55
12	300	13.9	200	5.4	100	---		2.5
13	(310)	(14.0)	---	(5.5)	(100)	---		(2.5)
14	(320)	(14.3)	---	5.6	(100)	---		(2.6)
15	(300)	>14.2	220	5.2	100	---		2.6
16	(260)	>14.2	220	---	100	3.6		2.6
17	---	14.0	240	---	100	3.1		2.6
18	---	>14.4	260	---	120	2.6	2.9	(2.7)
19	300	>14.0					2.7	---
20	360	---						---
21	270	---						---
22	230	---						---
23	210	---						---

Time: 45.0°E.
Sweep: 1.0 Mc to 17.0 Mc in 7 seconds.

Table 39

Budapest, Hungary (47.6°N, 19.0°E)								February 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		3.4						
01		3.6						
02		3.5						
03		3.4						
04		3.2						
05		3.4						
06		5.0				2.0		
07		8.0				2.4		
08		8.6				2.9		
09		9.5				3.0		
10		9.6				3.2		
11		9.5				3.3		
12		9.6				3.2		
13		9.2				3.1		
14		9.1				2.8	2.9	
15		9.0				2.4	3.0	
16		7.6				2.3		
17		5.9						
18		5.2						
19		3.8						
20		3.4						
21		3.4						
22		3.3						
23		3.4						

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 41

Sao Paulo, Brazil (23.5°S, 46.5°W)								September 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	230	7.8						3.3
01	220	8.3						3.35
02	210	7.6						3.65
03	220	5.2						3.4
04	240	3.6						3.2
05	260	3.5						3.1
06	240	4.8						3.4
07	220	6.8	220	---	120	2.3		3.5
08	250	7.3	210	---	100	2.7		3.4
09	270	8.2	200	---	100	3.1		3.3
10	300	9.2	200	4.7	100	3.2		3.1
11	300	10.0	190	4.7	100	3.4		2.95
12	300	11.1	190	4.7	100	3.4		(3.1)
13	300	11.8	190	4.6	100	3.2		3.1
14	290	12.1	190	---	100	3.2		3.1
15	270	12.0	200	---	110	3.0	3.8	3.2
16	260	12.0	220	---	120	2.8	3.6	3.3
17	230	11.2	230	---	110	2.2	3.7	3.3
18	220	10.4					2.8	3.4
19	220	8.3					2.4	3.3
20	220	8.4						3.35
21	220	8.2						3.2
22	230	7.7						3.3
23								

Time: Local.
Sweep: 1.75 Mc to 20.0 Mc in 7 minutes 18 seconds.

Table 38

Buenos Aires, Argentina (34.5°S, 50.5°W)								March 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	290	10.9						2.8
01	300	10.4						2.7
02	290	9.3						2.7
03	260	9.3						3.0
04	230	7.6						3.0
05	260	5.0						2.9
06	260	6.8	---	---	---	---		3.0
07	230	9.2	---	---	---	---		3.1
08	230	10.7	210	---	---	---	3.7	3.0
09	250	11.1	210	---	---	---	4.0	2.95
10	280	11.8	210	---	110	3.7	4.3	2.9
11	300	13.0	210	---	110	3.8	4.3	2.8
12	300	14.0	(220)	---	---	---	5.0	2.8
13	300	15.0	220	---	---	---	5.0	2.85
14	310	15.8	220	---	---	---	4.3	2.8
15	300	16.5	230	---	---	---	3.6	2.9
16	280	16.5	240	---	---	---	4.0	2.95
17	260	16.4	250	---	---	---	3.1	3.0
18	230	16.0						3.0
19	240	(16.0)						(3.0)
20	260	15.2						2.9
21	270	(12.0)						(2.9)
22	230	11.5						2.8
23	200	11.8						2.8

Time: 60.0°W.
Sweep: 1.0 Mc to 25.0 Mc in 27 seconds.

Table 40

Budapest, Hungary (47.6°N, 19.0°E)								January 1956
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00		3.2						
01		3.2						
02		3.1						
03		3.0						
04		2.8						
05		2.6						
06		3.7					2.0	
07		6.6					2.0	
08		8.1					2.5	
09		8.6					2.7	
10		8.6					2.8	
11		8.6					2.9	
12		8.5					2.0	
13		8.5					2.8	
14		7.6					2.4	
15		6.8					2.3	
16		6.2					---	
17		4.6					---	
18		3.5						
19		3.0						
20		3.2						
21		3.1						
22		3.2						
23		3.3						

Time: 0.0°.
Sweep: 1.0 Mc to 20.0 Mc in 1 minute.

Table 42

Sao Paulo, Brazil (23.5°S, 46.5°W)								August 1955
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	(M3000)F2
00	220	4.7						3.4
01	220	4.6						3.5
02	200	4.6						3.55
03	200	3.7						3.65
04	240	2.6						3.4
05	---	2.1						3.2
06	320	2.5						3.1
07	210	5.1						3.6
08	240	5.9	200	---	110	2.5		3.6
09	260	6.4	200	---	100	2.9		3.5
10	270	7.0	200	4.3	100	3.1		3.3
11	260	8.3	180	4.5	100	3.2		3.3
12	270	(8.9)	180	4.5	100	---		(3.4)
13	280	9.6	180	4.6	100	3.1		(3.4)
14	270	9.6	180	4.4	100	---		(3.45)
15	260	8.8	200	---	110	2.9		(3.4)
16	240	9.3	200	---	110	2.7	2.8	(3.35)
17	220	9.0	---	---				3.6
18	200	7.8						3.6
19	200	6.5						3.5
20	200	5.0						3.4
21	220	5.2						3.4
22	220	5.4						3.4
23	220	4.6						3.4

Time: Local.
Sweep: 1.75 Mc to 20.0 Mc in 7 minutes 18 seconds.

Table 43

Lulea, Sweden (65,6°N, 22,1°E) July 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	260	---					2.5
01							
02	250	(4,4)			---	1.8	2.5
03							
04	350	4,6	225	3,6	110	2,2	2,6
05							
06	340	5,0	200	3,8	100	2,5	
07							
08	360	5,2	200	4,2	100	2,7	
09							
10	350	5,2	200	4,3	100	2,7	
11							
12	350	5,3	200	4,3	100	2,7	
13							
14	350	5,0	200	4,2	100	2,7	
15							
16	330	5,0	200	4,0	110	2,7	
17							
18	265	4,9	225	3,7	110	2,3	
19							
20	240	4,9			125	1,9	2,4
21							
22	250	(5,0)			---	---	2,1
23							

Time: 15,0°E.

Sweep: 1,5 Mc to 10,0 Mc in 6 minutes, automatic operation.

Table 45

Poitiers, France (46,6°N, 0,3°E) March 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	<295	3,2					2,95
01	<280	3,2					3,00
02	<295	3,0					2,95
03	275	3,0					2,95
04	275	2,9					3,00
05	260	2,6					3,20
06	240	2,8				E	3,30
07	240	4,2	220	2,3	---	1,8	3,55
08	250	4,6	220	3,5	110	2,4	2,4
09	260	5,0	210	3,8	110	2,6	2,7
10	290	5,3	205	4,0	105	2,0	3,0
11	280	5,5	200	4,1	100	2,9	3,0
12	290	5,6	205	4,2	100	3,0	3,35
13	290	5,8	210	4,2	105	3,0	3,40
14	275	5,7	215	4,1	105	2,9	3,45
15	265	5,4	220	3,9	110	2,7	3,40
16	255	5,5	230	3,6	110	2,5	2,6
17	250	5,4	240	3,0	120	1,9	2,3
18	240	5,2		1,9	---	E	1,9
19	230	5,1					(3,25)
20	<235	4,5					(3,10)
21	245	3,7					3,20
22	250	3,4					3,00
23	260	3,3					3,00

Time: 0,0°.

Sweep: 1,6 Mc to 16,8 Mc in 1 minute

Table 47

Tananarive, Madagascar (18,8°S, 47,8°E) July 1954							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	230	2,5					1,6
01	230	2,3					1,8
02	240	2,0					1,8
03	230	1,9					1,7
04	240	1,7					2,1
05	<270	1,6					2,0
06	240	1,8					1,8
07	230	4,0			138	1,90	2,3
08	250	4,7	230	----	113	2,25	2,4
09	270	4,8	225	3,90	109	2,60	3,0
10	285	5,2	220	4,00	109	2,90	3,48
11	200	5,4	220	4,10	109	3,05	3,4
12	205	5,0	210	4,20	109	3,10	3,46
13	300	5,1	200	4,10	109	3,10	3,49
14	290	5,2	220	4,00	109	3,00	3,43
15	270	5,0	210	3,80	109	2,00	3,1
16	260	5,0	230	----	109	2,50	3,5
17	230	4,5			---	1,00	3,5
18	225	3,8					3,1
19	220	3,3					3,0
20	240	2,8					3,1
21	245	2,8					3,0
22	245	3,0					1,7
23	240	2,8					1,6

Time: Local.

Sweep: 1,25 Mc to 20,0 Mc in 10 minutes, automatic operation.

Table 44

Sao Paulo, Brazil (23,5°S, 46,5°W) July 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	220	3,7					3,35
01	220	3,0					3,3
02	260	3,6					3,3
03	220	3,9					3,6
04	220	2,8					3,35
05	---	2,4					(3,2)
06	---	2,1					(3,0)
07	220	4,7					3,6
08	230	5,7	210	---	120	2,3	3,5
09	260	6,4	210	---	110	2,7	3,5
10	260	7,5	200	4,3	100	3,0	3,4
11	270	8,5	180	4,4	100	3,2	3,4
12	260	9,0	180	4,4	100	3,2	3,4
13	270	9,1	190	4,4	100	3,1	3,3
14	270	9,0	200	4,2	110	3,0	3,4
15	260	9,2	190	---	110	2,9	3,3
16	240	9,2	220	---	120	2,5	3,4
17	210	8,5	---	---	---	---	2,6
18	200	7,4					3,5
19	200	5,7					3,5
20	220	5,2					3,3
21	220	4,6					3,4
22	230	4,5					3,4
23	220	4,2					3,5

Time: Local.

Sweep: 1,75 Mc to 20,0 Mc in 7 minutes 18 seconds.

Table 46

Casablanca, Morocco (33,6°N, 7,6°W) March 1955							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	---	3,00					3,00
01	---	3,00					2,95
02	---	3,00					3,00
03	---	3,00					3,00
04	---	3,00					3,20
05	---	2,90					3,30
06	---	2,60					3,40
07	225	4,20	---	----	---	----	3,70
08	240	5,20	220	3,35	110	2,20	3,70
09	250	5,60	210	4,00	105	2,60	3,60
10	265	5,70	200	4,20	105	2,90	3,50
11	275	6,10	200	4,30	105	3,10	3,50
12	280	6,40	200	4,40	105	3,10	3,35
13	285	6,50	190	4,35	105	3,20	3,35
14	270	6,70	200	4,30	105	3,15	3,35
15	280	6,40	225	4,20	105	3,00	3,35
16	200	6,50	230	4,10	105	2,80	3,30
17	265	6,70	235	3,80	110	2,40	3,35
18	250	7,00	240	3,10	125	(1,80)	2,70
19	<230	7,00					2,00
20	<205	5,20					3,50
21	---	3,70					2,60
22	---	3,30					2,20
23	---	3,00					1,80

Time: 0,0°.

Sweep: 1,6 Mc to 16,0 Mc in 1 minute 15 seconds.

Table 40

Djibouti, French Somaliland (11,5°N, 43,1°E) July 1953							
Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs (M3000)F2
00	(330)	----					<2,3
01	360	----					----
02	(380)	----					----
03	(380)	----					2,1
04	(290)	----					----
05	285	2,8					(3,04)
06	280	5,6	250		131	(1,90)	3,2
07	310	6,4	240	(4,00)	124	2,50	3,6
08	350	6,9	245	4,30	121	2,90	3,9
09	390	6,8	240	4,40	121	3,20	4,0
10	425	>7,0	230	4,40	121	3,35	4,3
11	450	7,0	220	4,45	121	<3,50	4,4
12	450	7,0	230	4,45	---	3,50	5,8
13	430	>7,0	230	4,40	---	---	6,1
14	395	7,4	230	4,30	---	3,30	4,4
15	370	7,9	235	4,15	---	3,15	4,3
16	345	8,2	240	3,90	---	---	4,3
17	310	8,3	250	----	---	---	3,5
18	275	(8,4)					3,0
19	270	(7,1)					2,7
20	290	>5,0					3,1
21	300	(4,6)					2,7
22	320	4,0					2,4
23	345	(3,4)					(2,51)

Time: 35,6°E.

Sweep: 1,25 Mc to 20,0 Mc in 10 minutes, automatic operation.

TABLE 49
IONOSPHERIC DATA

foF2, 0.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lot 38.7°N Long. 77.1°W Sweep 1.0 Mc to 2.5.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
01	61	57	52	45	43	44	54	64	70	69	72	78	82	85	76	80	84	82	80	84	84	78	72	69		
02	63	64	60	53	45	39	54	67	70	69	71	70	68	66	68	70	68	70	72	72	75	70	61	57		
03	58	56	52	46	44	47	52	58	68	72	72	76	76	80	80	78	80	84	84	84	83	76	72	68		
04	66	62	62	58	49	49	62	72	H 78	U F 85	94	H 85	84	83	85	85	85	84	89	88	86	78	74	67		
05	66	62	60	58	54	49	53	62	70	76	79	80	84	83	80	82	78	77	80	84	78	76	71	65		
06	61	58	54	49	F 47	46	64	82	86	85	90	87	88	88	86	82	80	85	86	86	83	76	70	64		
07	59	59	61	62	56	54	62	64	71	72	75	U S 72	72	73	73	72	F 72	F 72	F 73	U A 76	U S 75	74	68			
08	68	64	59	50	48	F 47	58	68	80	84	90	92	96	97	94	F 94	86	90	88	82	82	82	77	77		
09	70	67	F 59	54	48	F 43	48	51	60	65	59	63	F 62	F 60	62	F 64	66	68	70	68	70	67	57	58		
10	55	54	50	49	43	37	46	49	I A 53	50	52	54	56	56	59	59	60	59	60	58	58	62	58	60		
11	56	52	50	46	46	48	66	U J 62	71	70	74	77	86	84	79	82	84	78	84	80	U S 68	U S 66	U S 61	U S 59		
12	F 62	U A 54	U F 46	U F 38	37	37	46	49	51	60	58	62	64	61	61	F 62	63	61	62	63	U F 60	U F 60	U F 54	U F 54		
13	F 52	U F 51	U F 48	U F 41	U F 35	U F 36	F 49	F 62	F 63	F 63	F 64	F 63	F 63	F 67	F 66	F 66	66	68	70	70	U F 72	F 65	U F 60	F 59		
14	U F 58	F 56	F 54	U F 46	F 48	F 45	50	58	62	62	63	68	67	69	72	70	I C 70	70	72	70	69	68	67	65	60	
15	56	52	51	47	45	43	54	63	69	80	81	81	79	82	80	81	83	84	79	78	74	70	66	61		
16	60	59	57	53	48	48	64	75	84	86	85	90	88	88	86	86	82	80	76	79	76	76	70	70		
17	66	56	54	55	56	50	49	54	56	63	75	72	74	72	72	75	75	76	76	72	70	68	67	64		
18	62	60	57	54	50	48	56	64	68	H 71	74	76	78	79	80	78	79	76	72	74	76	70	66	61		
19	61	70	60	58	53	49	63	78	87	90	90	88	90	92	90	90	90	89	91	92	86	76	70	66		
20	64	58	63	59	57	54	60	72	74	80	83	86	90	88	89	88	86	88	86	86	80	72	71	60		
21	F 62	60	58	57	55	55	66	81	F 84	88	90	101	101	98	96	96	88	90	86	93	88	85	70	62		
22	59	52	53	50	48	44	56	60	64	67	73	83	88	92	94	92	92	98	85	85	76	70	68	66		
23	63	61	61	54	47	42	49	54	H 63	59	58	58	64	58	58	58	F 60	F 58	62	72	76	58	54	46		
24	U F 40	U F 24	U F 22	U F 20	U F 20	U F 28	E G 40	41	50	50	47	48	E G 49	52	53	E G 49	52	55	56	52	F 57	F 48	45	43		
25	40	36	31	28	22	26	38	43	52	F 52	E G 49	58	58	59	59	62	64	62	60	F 65	U F 60	U F 58	U F 62	64		
26	F 66	U F 62	U F 50	U F 40	U F 34	U F 31	F 44	48	53	56	53	55	56	59	59	58	58	57	61	I C 56	52	F 53	50	45		
27	F 44	F 43	F 40	F 40	F 41	F 39	54	67	70	78	88	88	86	86	90	88	87	85	86	83	76	72	64	66		
28	62	61	58	54	50	48	56	73	82	82	88	92	96	90	92	86	88	87	86	87	84	76	70	66		
29	62	62	62	57	58	55	66	76	86	86	93	90	92	94	96	90	90	92	88	90	84	76	70	68		
30	68	67	66	62	56	56	64	80	98	101	98	105	103	102	102	98	98	96	96	92	86	74	68	64		
31	66	63	63	58	F 56	F 54	F 62	70	84	85	90	99	90	99	100	98	94	92	88	U F 84	73	F 68	F 64	F 58		
MED	62	59	57	53	48	47	54	64	70	72	75	78	82	83	80	81	80	80	80	80	76	70	67	64		
NO	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31		

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 50
IONOSPHERIC DATA

foF2, 0.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2300	
01	57	53	50	44	43	49	62 ^H	64	65	71	77	80	86	78	80	83	84	80	83	82	80	73	72	68	
02	64	62	57	48	38	45	62	64	72	71	70	68	66	68 ^{U S}	68	68	70	70	74	78	68	64	58	58	
03	58	56	47	44	45	50	56	64	70	74	74	77	77	80	80	80	80	84	85	84	78	74	69	66	
04	62	66	60	56	48	56	65 ^{U S}	72	85	88	90	85	83	84	84	83	84	85	88	88	84	76	69	66	
05	63	60	56	53 ^F	52 ^F	50	57	67	70	77	80	82	85	84	80	78	78	80	82	78 ^J	78	74	68	62 ^J	
06	60	56	52	49	44	52	70	80	84	92	86	86	87	86	84	80	84	86	88	90	78	72	68	62 ^J	
07	60	60	61	59	54	58	64	68	70	74 ^J	73 ^J	71	72	72	73	70 ^{J F}	70	72	74	76 ^{I A}	74	72	72	68	
08	66	63	52	50 ^J	47	51	63	72	83	88	90	94	97	98	96 ^F	90	87	88	84	80 ^J	85	77 ^J	75	70	
09	67	62	55	48	46	47	55	54	61	58	62 ^{E G}	64	61	60	63	62	64	68	70	68 ^{J S}	70	64	58	55	
10	56	52	49	44	42	42	46 ^{J H}	52	49	52	50	56	56	58	58	58	59	60	59	60 ^J	60	60	58	57	
11	53	48	48	45	44	58	67	68	70	70	76	82	86	82	80	85	82	82	82	78 ^J	68	62 ^{U S}	66	58	
12	58 ^{I A}	50	42	38	37 ^{U F}	41	46	52	56	58	58	62	63	58	61 ^F	58	62	62	63	62 ^{U F}	60 ^{U F}	60 ^{U F}	56 ^F	53 ^F	
13	50 ^J	49 ^F	45 ^F	36 ^{U F}	33 ^{U F}	42	56	63	63	64 ^{I A}	63	63	66	66	64 ^F	67	66	68	70	70 ^{U F}	69 ^{U F}	62 ^{U F}	58 ^F	57 ^F	
14	53 ^F	56	49	47	46	45	54	57	62	63	66	67	68	70	70	72	70	70	68	69	67	66	61	57	
15	55	52	49	47	42	47	58	66	75	82	81	82	79	82	79	80	84	82	77	76	73	67	66	61	
16	59	58	55	50	47	55	69	78	84	85	88	90	88	88	87	84	81	76	79	78	74	72	70	73	
17	58	48	55	53	52	48	51	58	61	74	76	74	72	72	74	76	76	77	75	72	68	69	65	63	
18	61	60	56	60	49	50	64	68	68	75	72	76	79	80	79	78	76	74	73	78	71	70	64	62	
19	61	61	58	55	49	55	72	87	90	90	90	88	90	90	92	88	90	90	91	90	78	74	68	63	
20	61	62	63	58	54	55	67	74	77	80	86	88	88	90	87	87	88	86	88	85	79	72	64 ^F	63 ^F	
21	62	59	58	56	54	57	75	86	88	90	94	105 ^V	100	98	97	90	88	88	90	93	87	74	71	60	
22	53	54	55	50	45	47	59	62	64	70	80	87	92	94	92	92	90	98	84	83	77	69	66	63	
23	64	64	60	50	45	44	54	58	57 ^H	62	60	64	64	58	58 ^{I C}	62	59	58	66	82	60	56	50	45 ^F	
24	29 ^{U F}	24 ^{U F}	22 ^{U F}	20 ^{U F}	20 ^{U F}	36	42 ^{E G}	40 ^{E G}	49	47 ^{E G}	53	52	52	49 ^{E G}	54 ^{E G}	47 ^{E G}	52	55	52	54	50 ^F	48 ^F	43 ^F	38 ^F	
25	37	32	30	28	20	34	40	46	51	48 ^{E G}	52	58	58	58	59	62	63	64	63	65	58	58	60	66	
26	62 ^{U F}	50 ^{U F}	45 ^{U F}	35 ^{U F}	30 ^{U F}	37	50	52	54	50 ^{E G}	55	54	57	59	58	58	58	60		54	52	47	45		
27	43 ^F	42 ^F	42 ^F	41 ^F	41 ^F	45	58	70	74	78	86	92	86	88	88	86	84	84	84	78	74	67	66	64	
28	60	59	56	51	48	50	66	78	82	86	91	92	92	92	91	90	88	86	88	86	76	74	66	62	
29	62	61	59	56	55	55	68	78	85	90	90	90	93	94	92	92	92	90	88	86	78	70	66	68	
30	68	66	64	57	54	60	72	88	100	100	98	106	103	102	101	98	95	96	94	90	78	72	68	65	
31	64	65	62	58	54	56 ^F	67	78	84	96	95	94	94	98	96	96	90	90	86	76 ^F	70 ^{U F}	68 ^F	60 ^F	56 ^F	
MED	60	58	55	50	46	50	62	67	70	74	77	82	83	82	80	80	81	80	82	78	74	69	66	62	
NO	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	

TABLE 51
IONOSPHERIC DATA

fo F1, 0.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lat 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01							L	U L 420	460	500	H 580	540	590	540	540	H 520	500	L	L					
02							L	H 430	540	520	520	520	530	540	520	H 500	H 500	U L 460	L					
03							L	L	490	U L 510	U L 520	560	570	560	530	500	520	A	A					
04							L	L	L	U H 520	530	550	530	560	560	550	540	L	L					
05							L	L	480	500	540	H 580	560	550	550	540	L	L	L					
06							L	L	L	L	520	570	H 520	H 560	560	U L 560	L	480	L					
07							L	L	490	540	550	560	560	550	540	540	F 520	A	L					
08							Q	L	L		530	580	580	560	560	530	550	L	L					
09							Q	Q	A		510	510	520	F 540	530	520	520	480	L					
10							L		420	460	I A 480	490	500	520	U F 520	500	490	H 480	L					
11							Q		490	510	H U L 570	550	540	H U A 560	560	550	U H 510	U L 430	A					
12							A			A			H	H					Q					
13							Q	L	440	470	I A 480	520	530	520	F 530	530	520	490	470	L				
14							Q	L	450	520	H 500	520	530	540	530	530	490	H 450	L					
15							L	H 420	L	480	H 520	H 540	540	560	540	I C 520	490	L	L					
16							Q	L	500	L	L	L	560	560	L	540	L	L	L					
17							Q	L	H 490	490	520	530	550	560	H 590	520	520	450	L					
18							L	L	L	510	H 560	500	540	590	570	520	520	L	L					
19							L	L	L	H 490	H 540	H 570	580	590	570	540	L	L	L					
20							L	L	L	H 540	H 560	540	550	570	560	560	490	L	L					
21							Q	L	L	L	H 540	L	H 540	560	550	560	L	L	Q					
22							L	L	480	490	530	560	L	L	560	560	L	L	L					
23							Q	L	L	500	500	500	530	500	500	480	F 470	F 430	360					
24								410	450	460	470	480	490	490	480	490	450	420	L					
25							Q	Q	440	480	H 490	500	500	520	510	490	480	L	Q					
26							L	400	430	H 480	490	500	500	500	490	490	H 490	U L 450	L					
27							Q	L	L	L	460	580	620	600	550	L	L	L	Q					
28							Q	L	L	L	610	L	L	U H 550	L	L	L	L	Q					
29							Q	Q	470	L	L	L	L	L	L	L	L	L	Q					
30							Q	L	L	L	L	L	L	L	L	L	L	L	Q					
31							Q	Q	B 560	U L 560	L	590	600	620	U L 580	550	U L 440	L	L					
MED								420	480	500	520	540	540	550	540	520	490	460						
NO							8	17	23	26	26	27	28	26	27	21	12	1						

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 52
IONOSPHERIC DATA

foE, O.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01							A	270	U A	U A	U A	I A	I A	I A	I A	I A	I A	A						
02							200	270	310	340	370	380	390	390	390	360	340	300						
03							U A	U A	U A	U A	A	A	400	A	A	A	U A	300	A					
04							A	U A	U A	U A	I A	A	410	U A	U A	U A	U A	320	270					
05							A	A	U A	U A	A	A	U R	A	R	A	A	250						
06							A	A	A	A	A	U R	I A	I A	F									
07							A	A	320	A	A	A	400	400	400	390	380	360	330	260				
08							A	310	A	A	A	400	400	A	A	A	A	320	260					
09							U A	270	A	A	A	A	U A	A	A	U A	360	320	260					
10							A	A	A	U A	U A	320	380	400	410	400	380	350	310	A				
11							U A	270	310	A	A	A	390	A	A	360	350	310	A					
12							A	A	A	A	A	A	A	380	A	A	340	300	240					
13							220	I A	U A	A	A	A	A	U A	A	A	U A	310	250					
14							A	U A	310	340	I A	U A	A	A	370	A	A	310	230					
15							180	270	A	A	370	390	390	390	380	350	330	290	230					
16							190	250	A	A	A	390	400	400	400	380	360	340	310	240				
17							200	A	310	350	350	A	A	A	A	360	330	300	230					
18							180	260	I A	310	360	380	380	390	390	370	360	360	310	220				
19							180	270	H	310	320	370	380	400	380	390	370	340	310	220				
20							A	250	290	340	380	380	390	390	380	360	350	310	220					
21							H	200	260	310	350	370	390	390	390	390	360	310	230					
22							190	270	I A	310	340	370	350	I A	400	400	380	350	300	220				
23							A	270	300	350	380	390	390	390	390	370	330	290	220					
24							A	A	A	A	370	370	380	390	380	360	330	290	210					
25							210	270	310	350	370	380	R	R	380	360	330	300	230					
26							U P	200	280	340	350	390	390	400	390	390	360	340	300	A				
27							A	U P	A	A	A	H	U A	400	400	370	340	280	U A					
28							A	250	A	A	A	400	410	390	400	380	350	A	A					
29							A	270	320	350	390	400	400	400	390	370	340	U A	R					
30							U P	190	270	330	A	A	380	I A	390	390	370	330	290	220				
31							U A	I B	310	350	H	390	390	390	A	A	A	H	A					
							190	270	310	350	390	390	390				280							
MED							200	270	310	350	380	390	400	390	390	370	340	300	230					
NO							16	24	21	17	18	23	24	24	22	24	26	28	22					

TABLE 53
IONOSPHERIC DATA

fEs, 0.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23				
01	S	S	S						H								G						H					
02				S	24	35	36	60	39	43	54	42	47	45	46	100	44		44	48	42	84	34	39	27			
03	24	24		S	28	40	31	25	40	41	78	62		G				44	74	43	27	31		30				
04	Y	29	S		31	38	48	38	40	49	56	43	45	48	84	48	45	60	80	190	80	46	37	24				
05	S	S	S		29	45	72	37	39	43	43	52	45		G		42	50	40	48	56	58	74	44				
06	S	S	S	S	S	S		25	24	40	48	72	54	46		G		41	48	41	29	35		S	S			
07	S	S	E	E	S	S		60	44	70	70	55		G														
08		S	S	S	S	S		40	32	41	49	68	74	80	58		G		42	150	160	82	48	150	84	44	39	
09	39	36	39		S	S	S	25	38	48	44	70	44	45	66	62	74	66	44	40	40	70	40	42	41			
10	31	28		S	S	S		64	58	62	49	48	58	52	48	44	45		G	G	G	18		30	S	S		
11	S	S		S																	S							
12	31	31	31	50	28	36	32	38	68	160	80	170	49	80	80	54	G				S	S	S	S				
13	45	68	53	64	70	42	40	72	46	67	105	50	46	100	50	150									52			
14	S	S	S	S	S	S		45	45	50	80	110	58	56	47	50	H	H	H		52	31	31	54				
15	35	26		Y	30	32	30	44	49	74	60	39	48	43		37	G				34	35	36	52	31	31	54	
16	S	S	S	S	S	S	S	35	70	44	44		G	G	G	C	G				S	S	S	S	S			
17	S	S	S	E	S	S	20	36	45	150	39	41	44	44	45	40	46	37	41	37	25	S	S	S	S			
18	S	S	S	S	S	S	G	36	41	45	45	48	48	45	45		G	G			41	35	44	30	27	33	48	
19	31		S	S	S	S	30	58	45		74	46	45	49	42	70	50	35	35	17	S	S	S	S	42			
20	S	S	S	S	E	S	19	38	84	44	70	50	70	70	80		G				34	35	S	S	23	30	39	
21	25		S	E	E	E	S	20	40	47	76	60	64		72	47		G			34	18	28	S	S	S		
22	31	29	S	S	S	S	20	G	G		41	43		G	G	G	G	G	G	S	S	S	S	S	S			
23	S	S	S	39	S	S	21	30	50	66		G	47	49		G	G	G	G	31	23	S	S	S	S	S		
24	S	S	S	S	S	S	20	39	38		36	32		G	G	G	G	G	G	29		S	S	S	S	26		
25	22		S	E	S	S	B	26	30	45	70		G	G	G		42	39		G	B	S	B	S	S			
26	S	S	S	S	S	S	G	29	34	36	41		G	G	G	G	39	35		G	G	S	S	S	S	S		
27	S	S	S	S	S	S	G	G	G	G	G	G	G	G	G		38	G	G		C	S		34	35	S		
28	S	S	S	S	S	S		G				G			G						24	S	S	S	S	B		
29	S	S	S	S	S	S	23	34	33	33		G	29	40		G	39	36	46	40	S	S	S	S	S			
30	F	F	S	S	S	S	23	32	34	47	44		G	G	G	Y	G	G		32	29	G	B	B	S	B	B	
31	30	28		B	S	S	20	28	40	41	29		G	G	G	G	G		28	G		S	S	S	S			
32	S	S	37	S	S	S	21	29		45	38		G	G	G	G	42			37		28		S	S	S		
33	S	S	S	S	25	S	20	41		B	G	G					42	66	50	45	42	32	34	33	17	40	28	S
MED	31	28	I	37	29	34	36	24	39	45	47	52	44	44	40	41	40	39	38	35	37	35	34	32	39			
NO	14	10	9	13	10	11	30	31	31	31	31	31	31	31	31	30	31	31	31	21	15	18	14	15				

TABLE 54
IONOSPHERIC DATA

f min, 0.1 Mc, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	E S	E S	E S	E	E	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
02	E S	E S	E S	E S	E S	E	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
03	E S	E S	E S	E S	E	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
04	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
05	E S	E S	E S	E S	E S	E	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
06	E S	E S	E	E	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
07	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
08	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
09	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
10	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
11	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
12	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
13	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
14	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
15	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
16	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
17	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
18	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
19	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
20	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
21	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
22	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
23	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
24	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
25	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
26	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
27	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
28	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
29	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
30	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
31	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	E S	16	16	16	16	16	16	16	16	16	16	16	16
MED																								
NO																								

TABLE 55
IONOSPHERIC DATA

h' F2, Km, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
01	280	270	270	250	300	290	310	330	310	320	380	360	380	320	350	330	330	280	280	250	260	250	260	260	
02	260	260	250	250	250	260	290	310	400	370	350	350	370	430	400	370	380	340	310	270	240	240	250	270	
03	280	280	270	320	350	300	280	330	310	330	370	400	370	340	320	330	310	270	240	240	240	260	270		
04	270	280	270	270	260	280	260	260	270	320	320	340	380	340	340	350	350	300	270	250	270	250	270		
05	280	280	290	300	280	280	310	320	300	340	370	350	360	350	340	330	330	260	240	240	250	250			
06	260	260	240	240	250	230	260	290	310	360	330	340	360	360	370	370	320	280	250	250	270	250	260		
07	300	300	280	290	270	270	270	330	380	380	410	430	410	410	410	400	400	260	300	340	290	280			
08	270	290	290	310	280	300	250	280	280	320	370	360	350	370	310	340	330	270	250	310	270	280	280		
09	260	290	280	300	300	300	260	260	420	520	540	470	400	610	520	480	440	400	320	270	250	240	240	270	
10	280	270	260	300	290	290	440	500	700	660	640	650	510	540	470	400	350	280	270	310	320	310			
11	300	310	290	320	300	310	240	290	260	330	380	450	400	380	390	400	320	320	270	240	240	270	300	310	
12	320	350	400	460	340	300	300	450	500	520	450	470	500	430	460	400	250	280	250	250	280	290			
13	290	280	270	280	280	280	250	310	330	400	430	470	460	460	470	440	370	380	310	270	270	250	260	280	
14	300	270	280	290	280	270	240	310	330	410	450	420	470	440	390	400	330	330	260	250	270	270	270		
15	280	280	270	280	280	260	290	300	300	290	300	350	360	350	350	330	310	270	250	240	250	270	260		
16	270	270	250	240	250	250	240	260	280	280	330	350	350	330	320	320	250	250	270	270	280				
17	250	320	350	300	280	250	250	440	340	340	340	390	450	370	340	310	270	250	240	270	260	280			
18	280	280	280	270	270	260	270	250	340	300	380	360	350	320	320	250	260	240	250	250	270				
19	280	260	260	250	240	230	250	250	260	260	300	320	340	360	350	320	310	270	240	220	260	260	290		
20	280	270	270	250	270	270	270	280	290	330	330	330	330	360	350	340	300	270	240	230	240	250	250		
21	280	270	290	270	290	270	250	260	260	250	300	300	340	320	320	320	280	260	250	240	220	220	240		
22	270	290	300	320	310	300	300	330	420	400	390	360	330	320	350	350	250	250	250	240	270	270			
23	290	300	270	260	290	280	260	350	560	510	450	390	460	550	520	440	410	380	310	250	290	310	300		
24	340	430	400	450	400	330	290	560	700	640	600	580	440	310	260	300	280	310	260	300	280	310			
25	290	290	320	350	350	350	280	240	440	500	540	500	570	550	460	380	240	270	260	320	320	300			
26	270	250	300	320	350	380	400	360	450	450	690	640	670	530	560	510	450	340	260	290	290	300			
27	320	310	310	300	300	280	260	260	250	260	340	340	340	310	350	350	250	240	250	270	290	300			
28	310	290	280	270	270	270	250	240	270	350	280	340	340	340	300	290	260	260	250	240	240	270			
29	290	290	280	270	270	250	240	240	270	270	330	340	340	340	330	350	250	250	250	250	270	300			
30	290	290	290	280	290	300	260	260	260	250	310	330	300	330	300	330	310	250	250	240	240	250	260		
31	280	280	280	260	280	250	240	240	260	300	260	330	350	370	340	310	280	270	250	250	250	270	270	270	
MED	280	280	280	280	280	280	260	280	310	320	340	360	360	380	360	350	340	330	270	250	250	260	270	270	
N0	31	31	31	31	31	31	26	26	25	29	30	29	30	30	29	29	27	19	25	30	31	31	31	31	

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 56
IONOSPHERIC DATA

h'F1, Km, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
01							270	230	220	210	205	200	215	210	205	H	220	U A	240	220					
02							250	215	H	210	230	210	190	200	210	210	H	H	200	220	240				
03							230	220	U A	U A	230	210	230	200	215	215	220	A	A	A					
04							240	230	210	H	200	220	220	200	240	200	H	210	210	225	A				
05							240	220	220	215	210	200	200	200	215	210	220	230	240						
06							220	230	220	H	200	210	200	200	205	210	220	230	240	A					
07							240	230	220	U A	U A	U A	U A	200	230	240	U A	I A	240	240					
08							Q	240	225	200	190	210	230	220	220	220	220	230	240						
09							Q	Q	A	200	200	200	200	220	220	220	215	240	240						
10							260	230	230	I A	225	220	190	200	220	220	230	230	220	260					
11							Q	220	210	H	H	H	190	210	210	210	240	230	210	A					
12							A	270	250	A	A	U A	H	H	220	230	220	230	240	Q					
13							Q	230	230	U A	240	A	A	220	210	220	230	225	230						
14							Q	230	215	I A	H	H	200	220	210	220	240	220	220	250					
15							250	220	H	U A	200	190	190	200	205	210	I C	220	240	230					
16							Q	240	210	210	200	200	200	210	210	210	210	230	A						
17							Q	230	210	H	200	220	200	190	220	220	230	230	240						
18							250	230	215	215	200	180	180	200	190	210	220	220	240						
19							240	230	H	220	210	200	200	210	210	210	220	230	240						
20							250	230	220	H	210	230	210	200	210	210	220	230	250	Q					
21							Q	230	210	220	190	220	200	215	210	225	220	250							
22							270	250	I A	U A	240	235	210	215	210	215	220	215	240	230	250				
23							Q	265	H	230	220	220	200	240	200	230	230	240	250	280					
24							240	240	240	220	215	230	220	230	230	235	220	245	260	Q					
25							Q	Q	215	200	190	190	230	230	210	230	220	230							
26							280	230	220	H	200	220	200	230	215	220	220	210	235	250	Q				
27							Q	240	230	220	220	200	210	210	210	220	225	220							
28							Q	230	215	210	200	190	230	200	220	H	210	230	Q						
29							Q	Q	205	210	H	200	190	220	210	220	220	240	260	Q					
30							Q	240	230	210	205	210	220	190	205	225	230	240	Q						
31							Q	Q	B	H	210	210	215	210	240	230	225	230	240	240					
MED							250	230	220	210	205	200	210	210	215	220	220	230	240						
N0							14	27	29	30	29	30	30	31	31	31	30	30	19						

TABLE 57
IONOSPHERIC DATA

h'E, Km, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01							119	111	105	105	109	105	109	103	105	109	109	109	113					
02							120	111	105	103	101	101	101	101	101	101	101	109	111					
03							U A 123	115	105	105	103	103		A	A	A	A	105	109	A				
04							119	111	105	103	101	101	101	101	101	101	109	103	115					
05							121	111	109	109	109	109	109	109	105	101	103	111	115					
06							U A 115	117	103	105	101	105	111	109	105	103	103	103	119					
07							119	111	109	105	105	105	101	101	101	107	105	111	115					
08							119	115	109	105	109	109	109	101	101	101	101	101	115	U A				
09							115	115	101	107	107	107	101	101	103	105	105	107	115					
10							120	101	101	103	101	103	103	101	109	105	120	A	A					
11							120	105	109	101	103	101	101	101	101	101	111	105	119					
12							A	111	105	103	103	101	105	U A 111	103	103	109	109	119					
13							U A 121	111	109	109	109	109	101	119		A	A	A	101	121				
14							U A 121	109	109	109	A	A	A	A		109	109	114	119	119				
15							115	109	107	109	109	105	101	101	109	I C 104	H 101	109	121					
16							119	109	105	101	103	101	U A 103	U A 109	U A 101	U A 103	U A 109	105	115					
17							119	111	105	101	101	101	U A 101	U A 101	U A 101	101	103	107	111					
18							113	107	103	101	101	101	101	103	101	101	101	103	111					
19							109	111	101	101	101	101	101	101	101	105	101	109	109					
20							U S 119	107	101	101	101	101	101	101	101	U A 101	H 101	101	109	109				
21							119	109	101	101	101	101	101	101	101	109	101	109	111					
22							123	109	101	101	101	103	103	105	103	103	105	109	111					
23							119	109	105	101	101	119	101	101	105	103	103	109	119					
24							111	109	103	101	109	109	105	109	109	105	111	119						
25							129	103	109	105	101	101	107	103	101	103	101	115	117					
26							115	101	107	103	103	101	H 101	H 101	H 101	101	101	103	109	U A				
27							121	109	103	101	121	101	H 109	101	101	101	101	101	101					
28							135	115	105	101	101	101	101	101	105	101	101	105	119					
29							119	103	101	101	113	113	101	101	107	101	111	121	R					
30							129	111	115	111	109	105	103	101	101	105	U A 109	115	125					
31							121	111	I B 110	109	109	107	109	109	A	A	U A 109	U A 109	129					
MED							119	111	105	103	103	103	101	101	101	103	104	109	115					
NO							29	31	31	31	30	30	29	29	28	28	30	30	28					

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 58
IONOSPHERIC DATA

(M 3000) F2, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec.

Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
01	270	280	280	280	270	290	285	300	320	300	280	290	280	300	290	300	290	290	300	290	290	280	280	280	
02	270	290	290	290	290	295	300	310	290	290	300	290	295	270	280	290	285	290	295	300	310	295	290	290	
03	280	280	280	270	270	310	310	305	310	315	300	290	280	290	295	290	295	300	300	290	290	290	280	280	
04	285	280	285	300	300	300	320	310	290	310	300	280	280	280	290	290	280	280	290	300	310	290	280	275	
05	275	270	270	270	270	300	315	290	310	315	295	290	290	285	290	295	290	295	290	310	300	290	300	290	
06	280	285	300	290	290	295	305	320	300	315	305	285	280	290	280	280	280	290	290	290	300	290	290	290	
07	275	270	275	290	285	300	320	320	295	285	290	275	265	270	275	270	270	270	290	290	290	290	280	275	
08	280	275	280	260	275	280	305	310	300	290	280	275	270	275	270	275	280	280	295	285	280	280	280	275	
09	270	270	270	270	270	280	290	295	270	255	240	260	290	230	250	260	260	270	290	285	270	280	270	280	
10	270	280	280	275	280	290	320	275	260		220	230	230	225	255	250	260	280	280	290	280	270	265	270	
11	270	265	275	260	270	275	340	325	350	310	275	255	275	280	270	260	290	280	285	295	290	270	270	270	
12	265		255	260	265	290	310	270	275	275	255	250	270	265	260	270	260	270	275	290	280	270	280	270	
13	270	280	280	270	280	290	320	310	305	280	280	265	260	260	255	260	275	275	290	290	290	290	285	270	
14	265	275	270	270	290	300	300	310	290	280	265	275	260	260	270	270	280	280	285	285	275	280	275	275	
15	270	280	280	280	270	290	300	310	300	290	295	285	280	280	290		285	285	290	290	280	280	275	280	
16	280	275	290	290	290	290	320	310	320	300	295	290	280	280	280	290	290	290	295	295	290	280	275	270	
17	290	260	240	265	275	300	310	300	290	250	300	300	290	280	265	280	285	285	290	300	280	270	275	275	
18	275	285	270	275	285	300	320	300	300	280	285	285	275	280	275	285	280	285	290	285	300	280	285	270	
19	275	280	285	290	290	295	310	330	320	300	300	295	280	280	290	285	290	290	300	290	290	280	285	270	
20	270	270	270	280	270	290	300	310	300	300	285	280	280	285	285	285	290	285	295	290	300	285	290	300	
21	290	290	270	270	270	280	305	320	300	285	270	260	270	270	270	285	280	280	280	285	285	285	290	285	
22	270	255	255	260	255	270	285	285	270	275	280	290	285	280	280	280	280	280	290	280	280	285	270	265	
23	260	255	270	270	270	270	285	290	270	245	250	270	295	270	245	250	270	270	260	260	290	270	250	245	
24	250	240	230	240	250	260	295		240	240					230	235		240	260	280	270	280	280	260	
25	280	280	250	260	260	270	300	320	280	260		250	260	240	245	260	280	280	280	285	270	250	260	260	
26	270	280	270	265	250	250	260	280	270	270	220	225	220	250	240	250	265	280	290		290	270	270	260	
27	260	270	270	270	270	280	320	320	330	330	290	290	290	270	280	280	280	280	290	300	285	280	260	260	
28	260	260	270	275	280	290	320	320	310	300	290	280	280	280	280	280	290	290	290	285	300	290	280	280	
29	270	270	270	270	280	295	320	320	330	300	300	295	280	275	280	285	280	290	290	290	290	285	270	270	
30	270	270	270	280	265	270	295	315	320	300	300	280	285	280	280	290	290	290	300	305	300	290	280	270	
31	270	280	275	270	285	290	310	300	320	285	280	280	270	260	270	270	280	280	295	290	290	270	280	280	
MED	270	275	270	270	270	290	310	310	300	290	285	280	280	275	275	280	280	280	290	290	290	280	280	275	
NO	31	30	31	31	31	31	31	31	31	30	31	31	31	31	31	30	31	31	31	30	30	31	31	31	

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

TABLE 59
IONOSPHERIC DATA

(M 3000) F1, August 1956

75° W Mean Time

Station: Washington, D.C. Lat. 38.7°N Long. 77.1°W Sweep 1.0 Mc to 25.0 Mc in 13.5 sec. Manual ☐ Automatic ☒

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01							L	U L			H					H		L	L					
02							L	H										U L	L					
03							L	L			U L	U L					U A	A	A					
04							L	L			U H	U L	U H			H		L	L					
05							L	L				H	H				L	L	L					
06							L	L									L							
07							L	L									F	A	L					
08							Q	L										L	L					
09							Q	Q											L					
10							L											H	L					
11							Q										U H	U L	U L	A				
12							A										U H	U L	U L					
13							Q										U A	U A	U L					
14							L										U A	U A	U L					
15							L										U A	U A	U L					
16							Q										U A	U A	U L					
17							Q										U A	U A	U L					
18							L										U A	U A	U L					
19							L										U A	U A	U L					
20							L										U A	U A	U L					
21							Q										U A	U A	U L					
22							L										U A	U A	U L					
23							Q										U A	U A	U L					
24							L										U A	U A	U L					
25							L										U A	U A	U L					
26							Q										U A	U A	U L					
27							Q										U A	U A	U L					
28							Q										U A	U A	U L					
29							Q										U A	U A	U L					
30							Q										U A	U A	U L					
31							Q										U A	U A	U L					
MED																								
NO							8	17	22	25	26	27	27	26	26	21	12	1						

CENTRAL RADIO PROPAGATION LABORATORY, NATIONAL BUREAU OF STANDARDS, BOULDER, COLO.

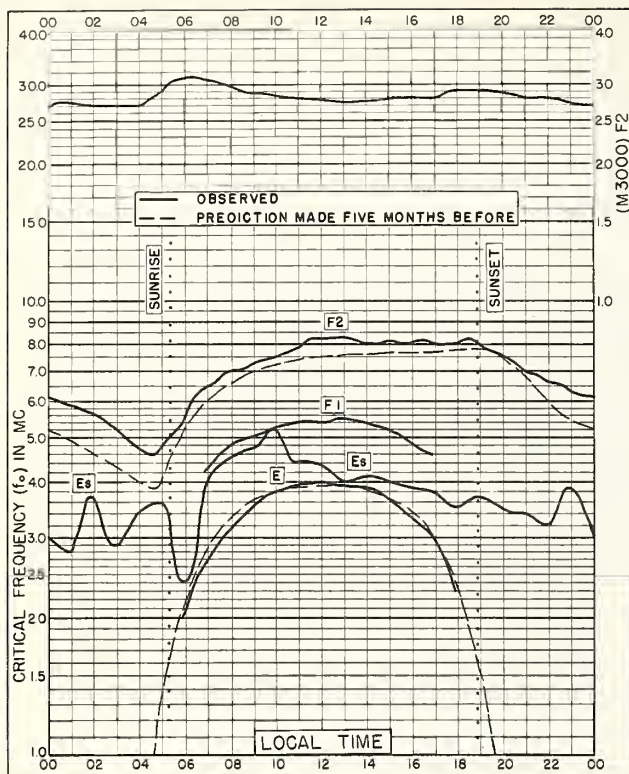


Fig. 1. WASHINGTON, D.C. AUGUST 1956
38.7°N, 77.1°W

NBS 503

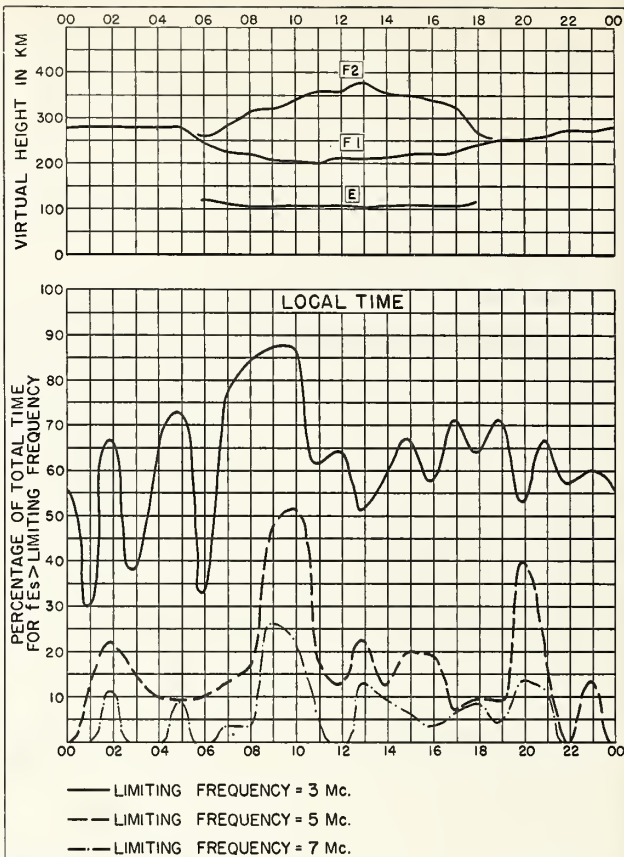


Fig. 2. WASHINGTON, D.C. AUGUST 1956

NBS 490

N. H. JOHNSON, NATIONAL BUREAU OF STANDARDS

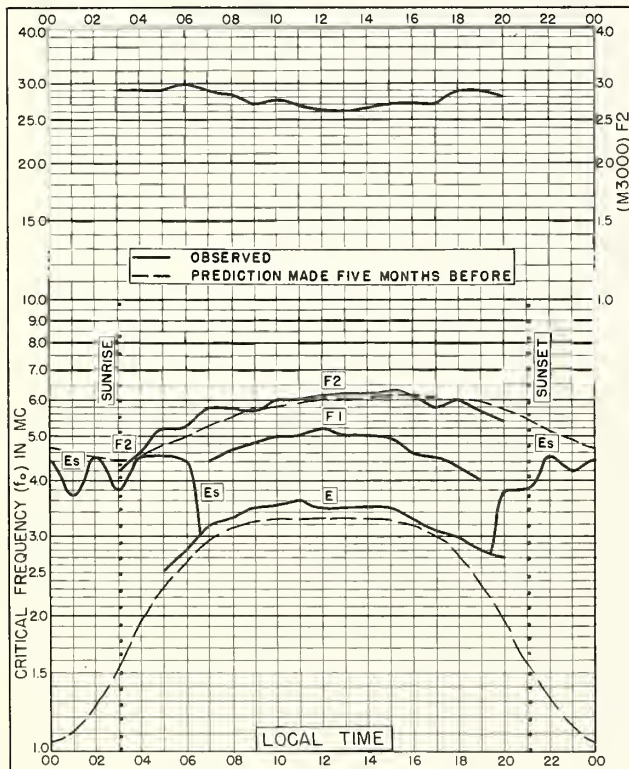


Fig. 3. NARSARSSUAK, GREENLAND JULY 1956
61.2°N, 45.4°W

NBS 503

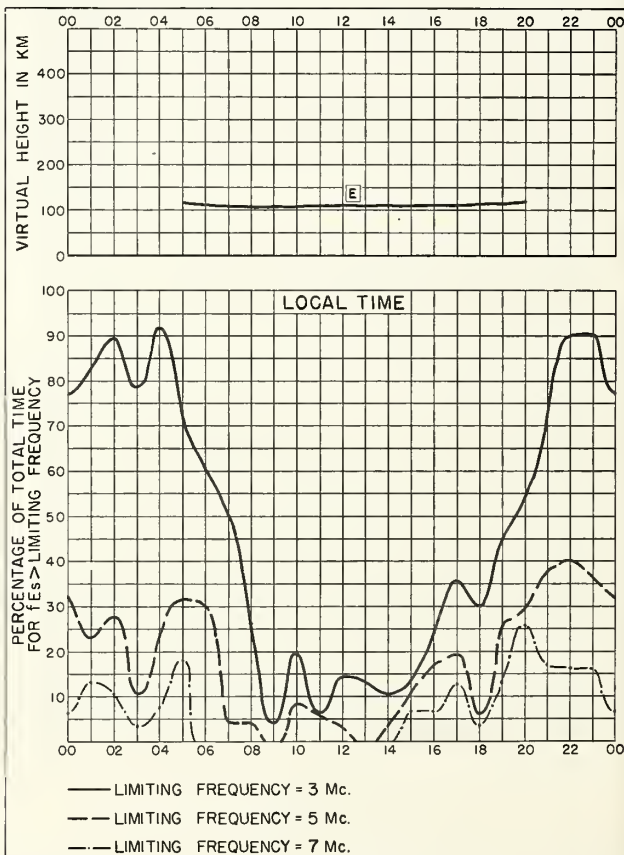
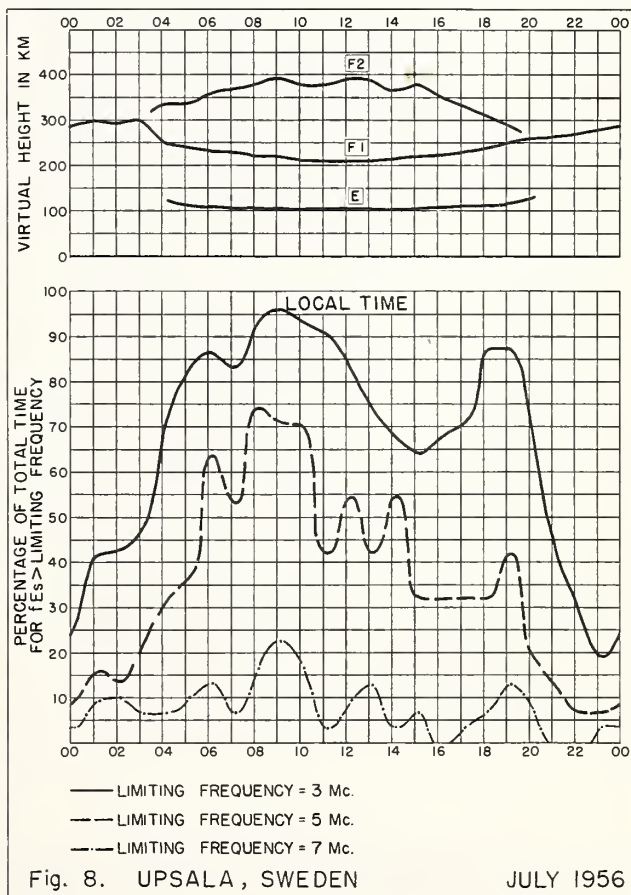
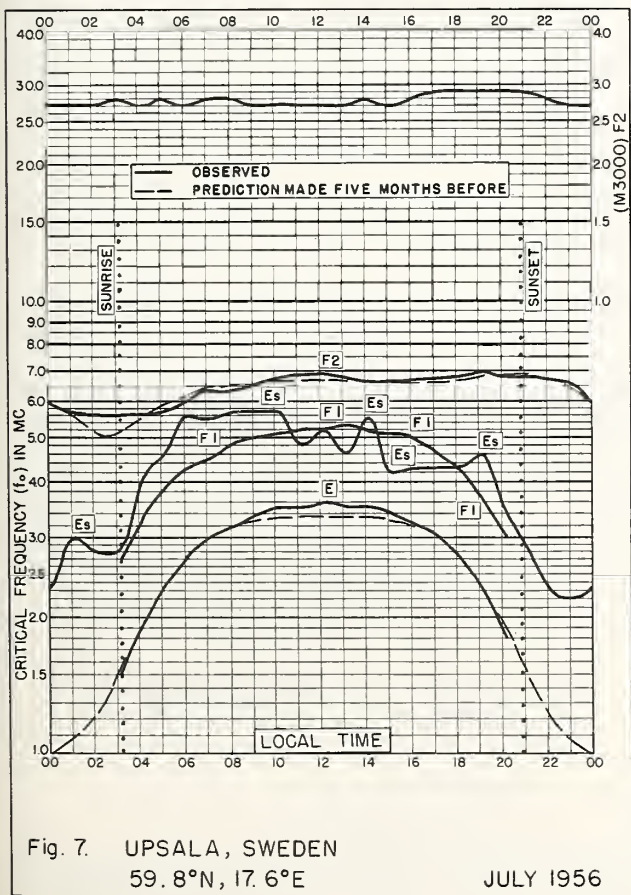
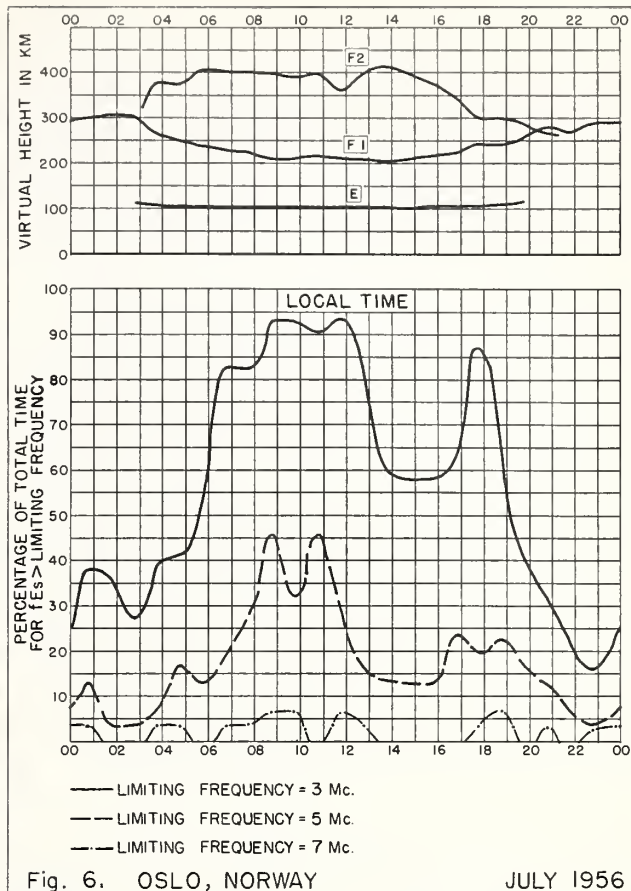
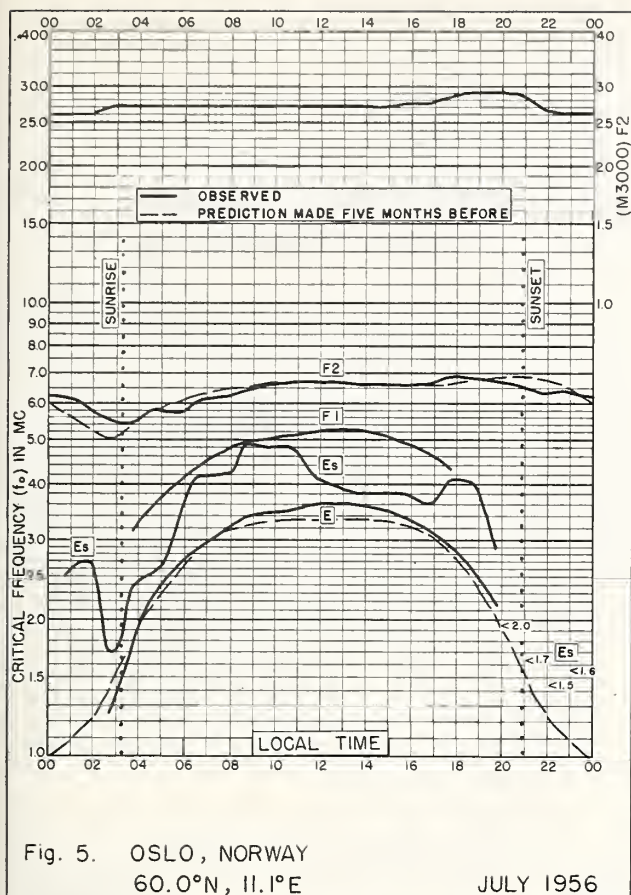


Fig. 4. NARSARSSUAK, GREENLAND JULY 1956

NBS 490

N. H. JOHNSON, NATIONAL BUREAU OF STANDARDS



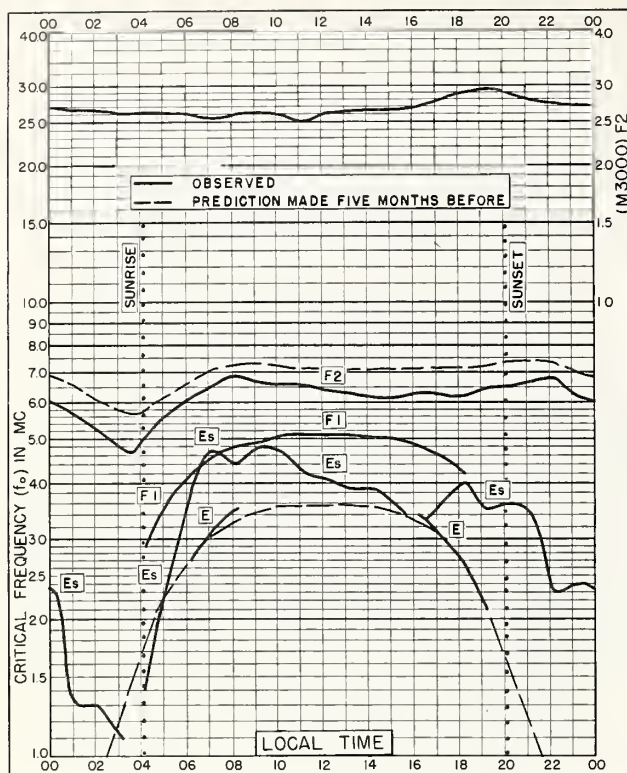


Fig. 9. ADAK, ALASKA
51.9°N, 176.6°W

JULY 1956

NBS 503

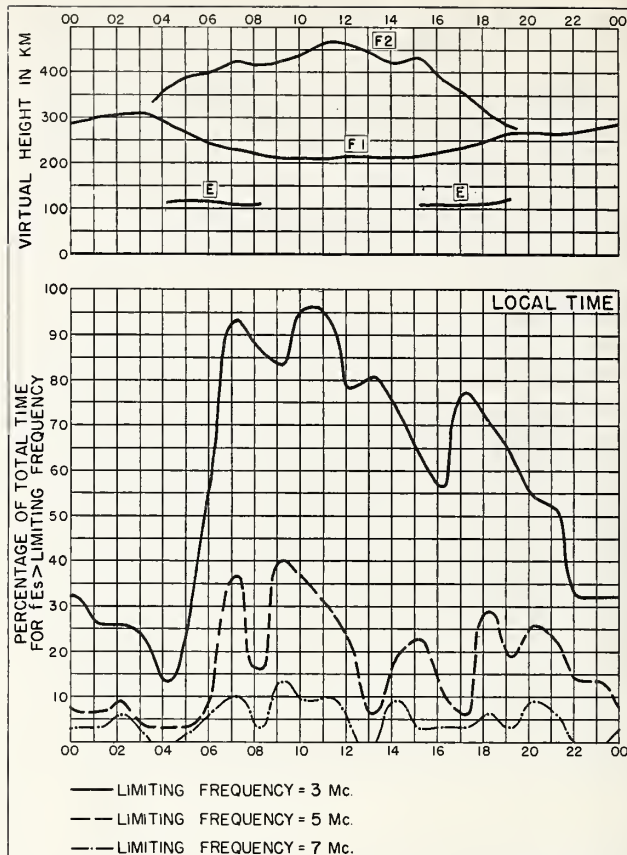


Fig. 10. ADAK, ALASKA

JULY 1956

NBS 490

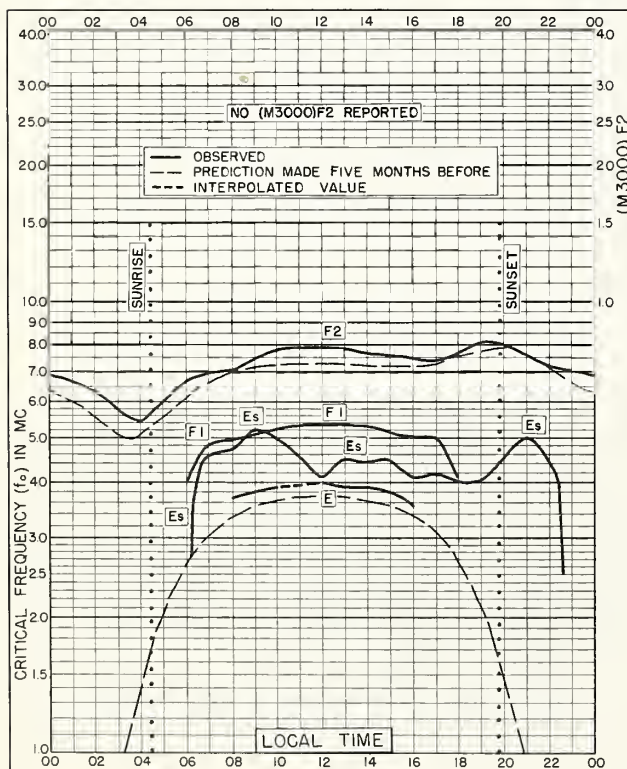


Fig. 11. GRAZ, AUSTRIA
47.1°N, 15.5°E

JULY 1956

NBS 503

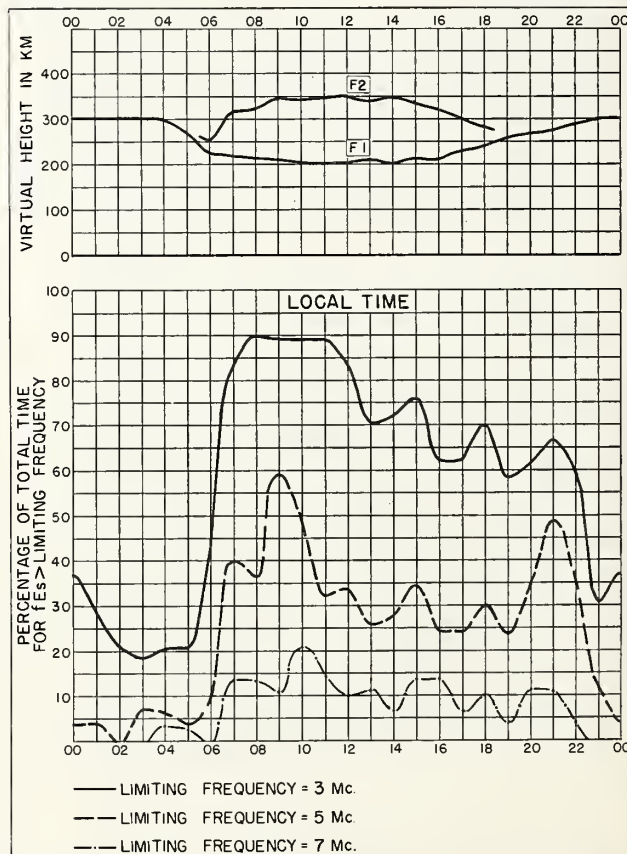
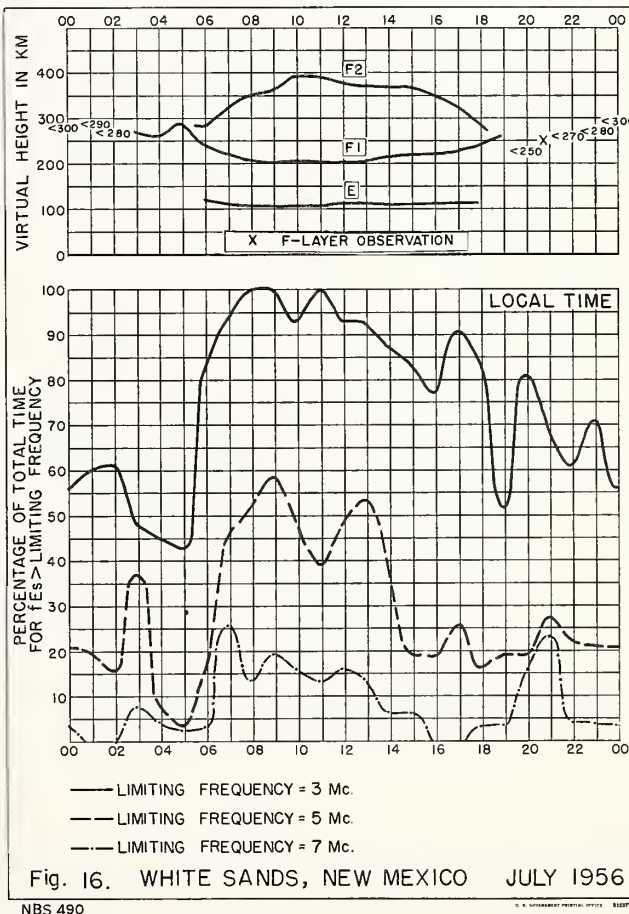
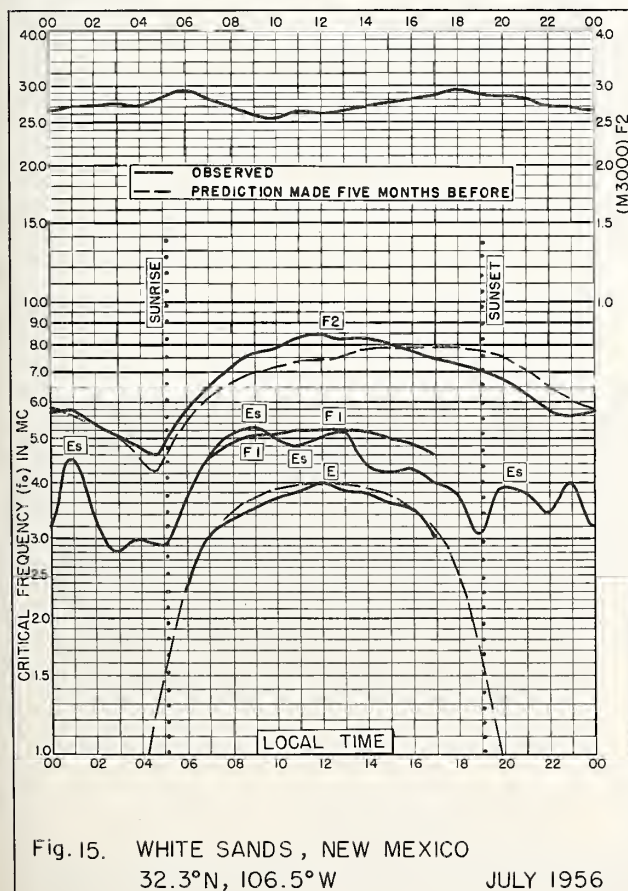
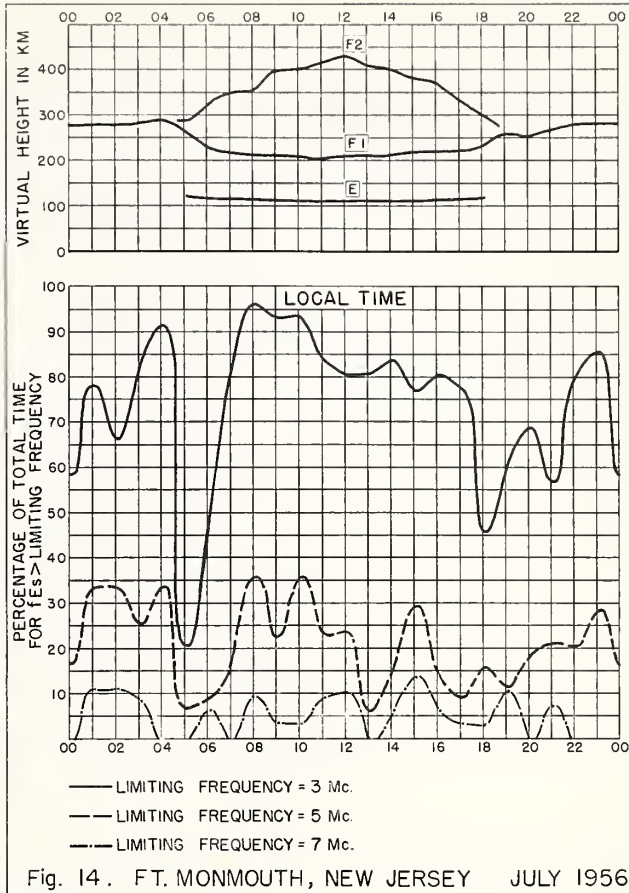
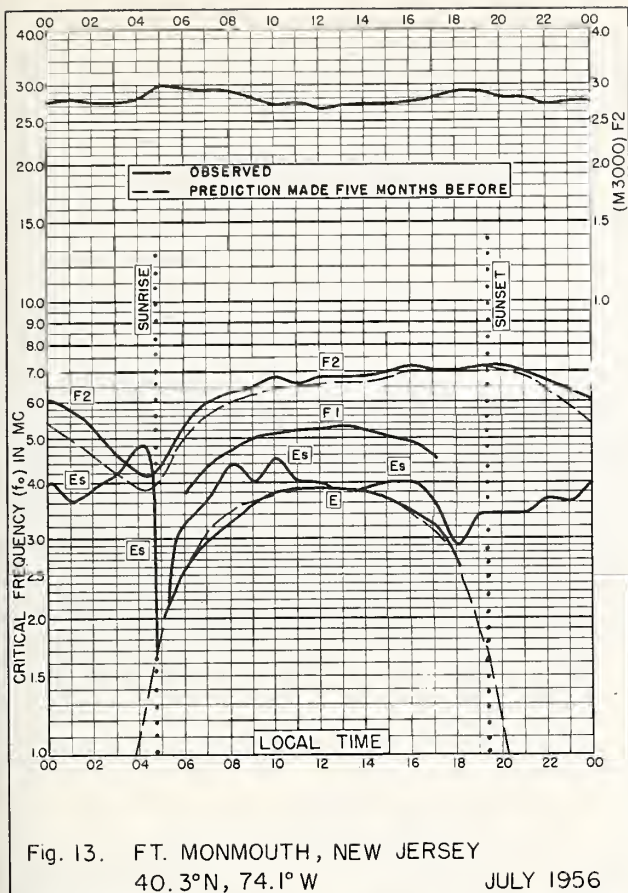


Fig. 12. GRAZ, AUSTRIA

JULY 1956

NBS 490



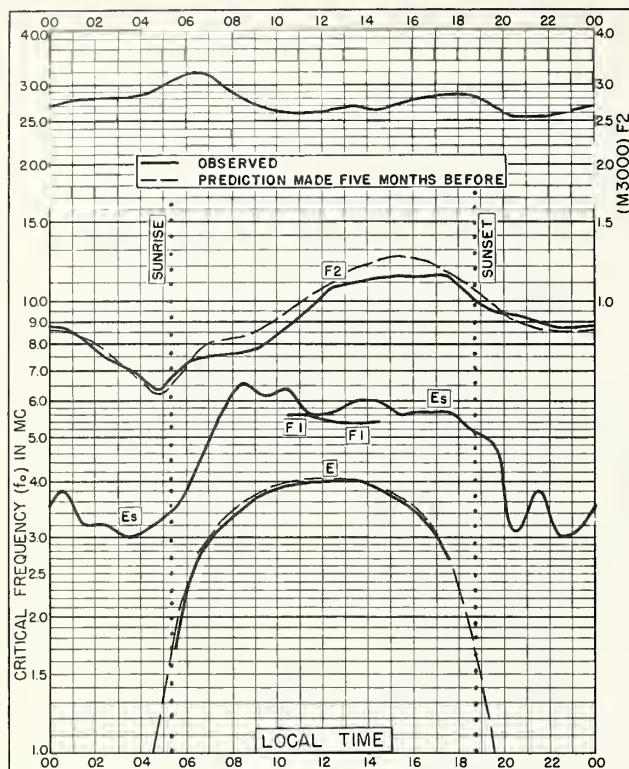


Fig. 17. OKINAWA I.
26.3°N, 127.8°E

JULY 1956

NBS 503

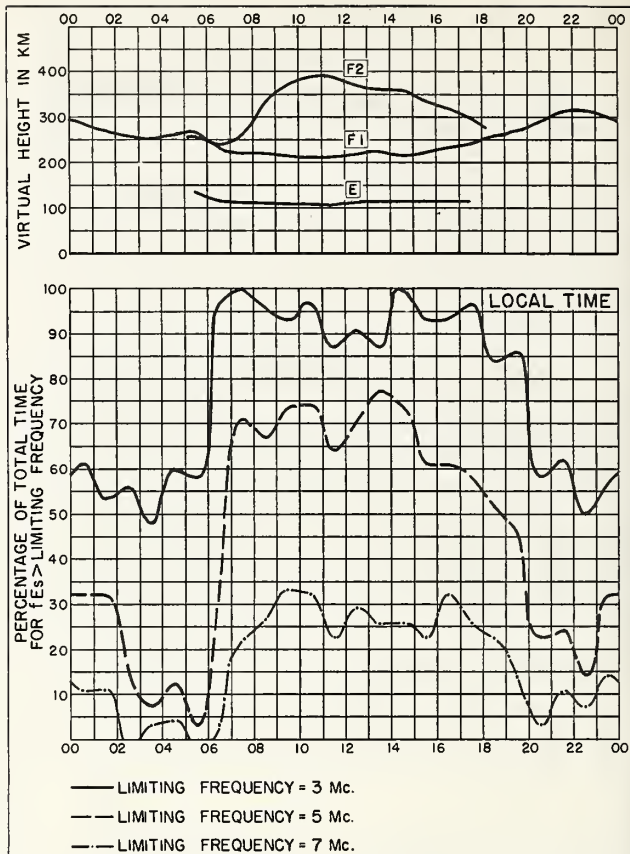


Fig. 18. OKINAWA I.

JULY 1956

NBS 490

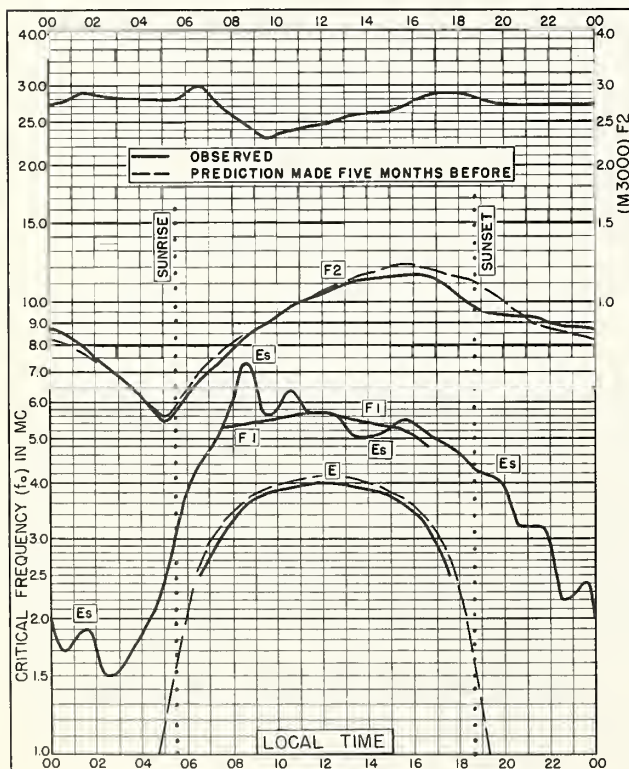


Fig. 19. MAUI, HAWAII
20.8°N, 156.5°W

JULY 1956

NBS 503

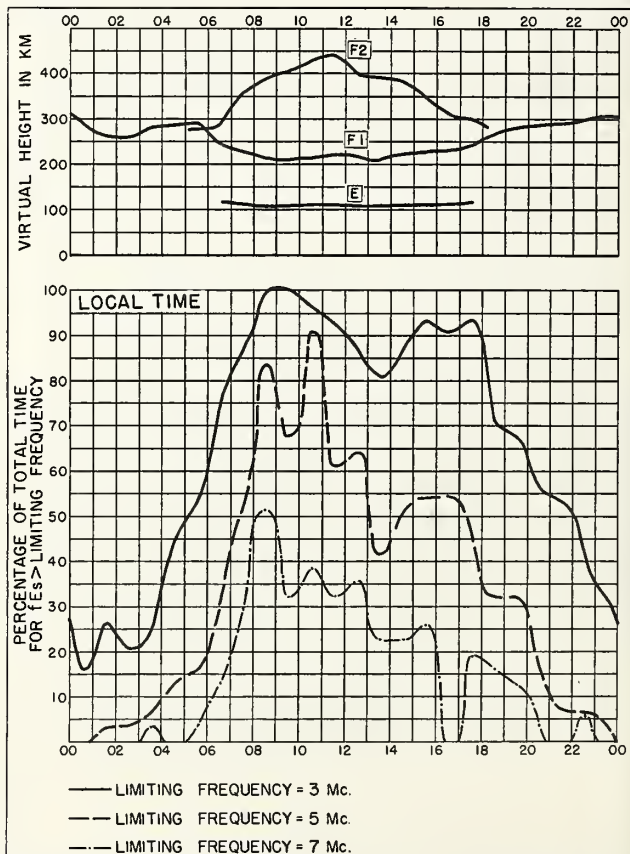


Fig. 20. MAUI, HAWAII

JULY 1956

NBS 490

N. S. INTERNATIONAL RESEARCH OFFICE 510077

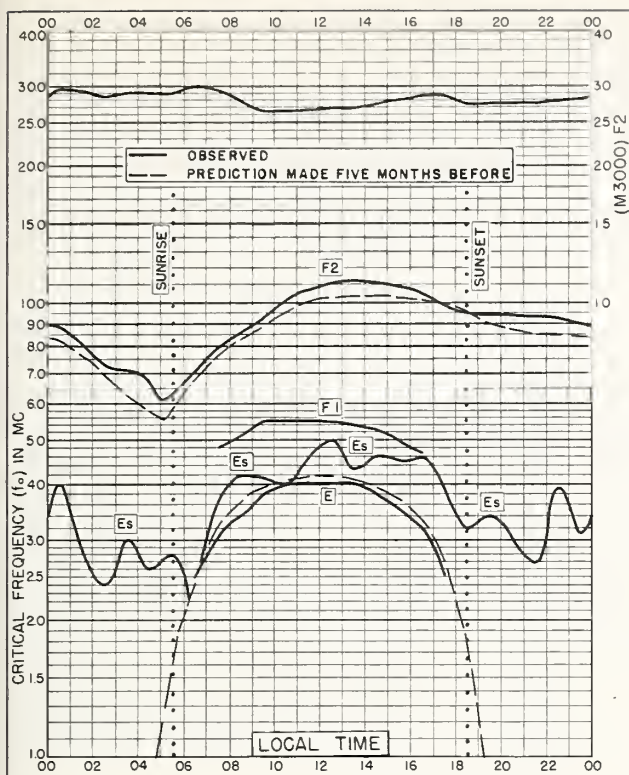


Fig. 21. PUERTO RICO, W.I.
18.5°N, 67.2°W

JULY 1956

NBS 503

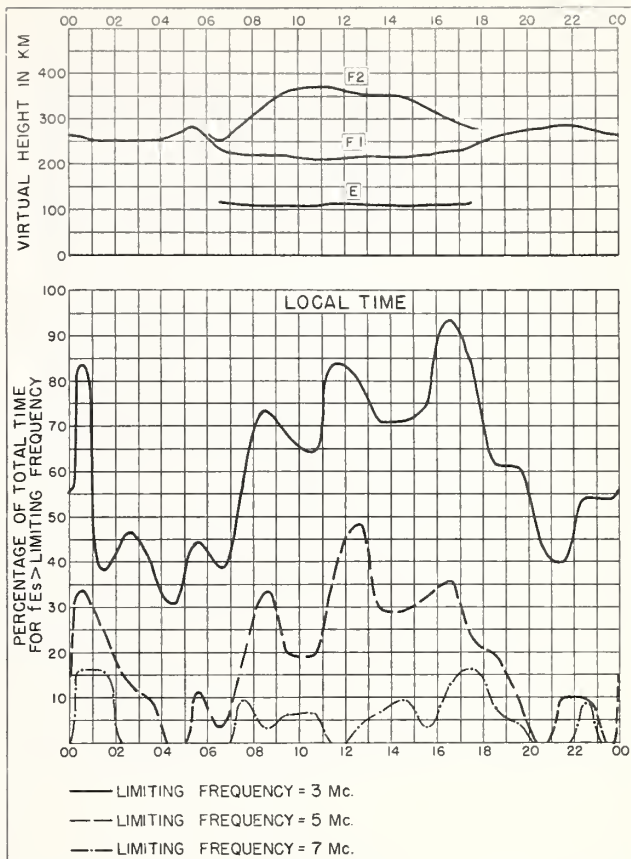


Fig. 22. PUERTO RICO, W.I.

JULY 1956

NBS 490

N. S. INTERNATIONAL RESEARCH OFFICE 212077

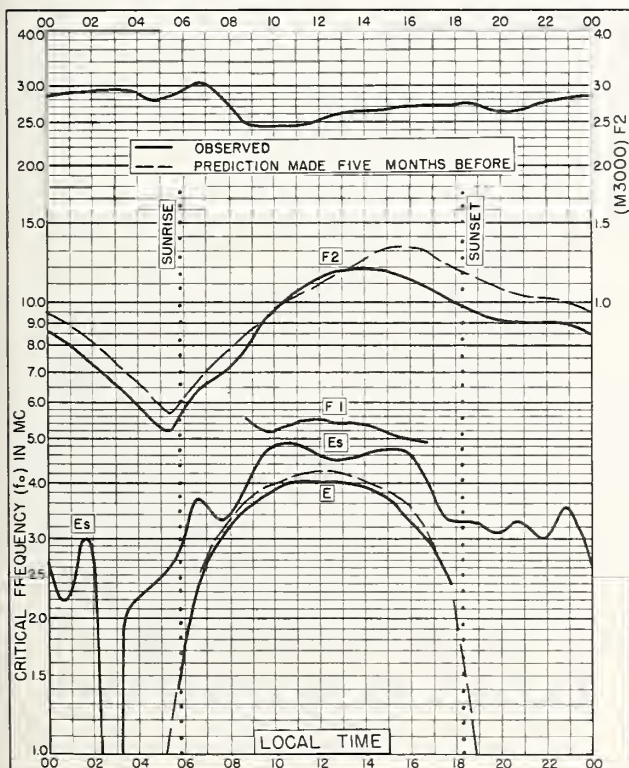


Fig. 23. PANAMA CANAL ZONE
9.4°N, 79.9°W

JULY 1956

NBS 503

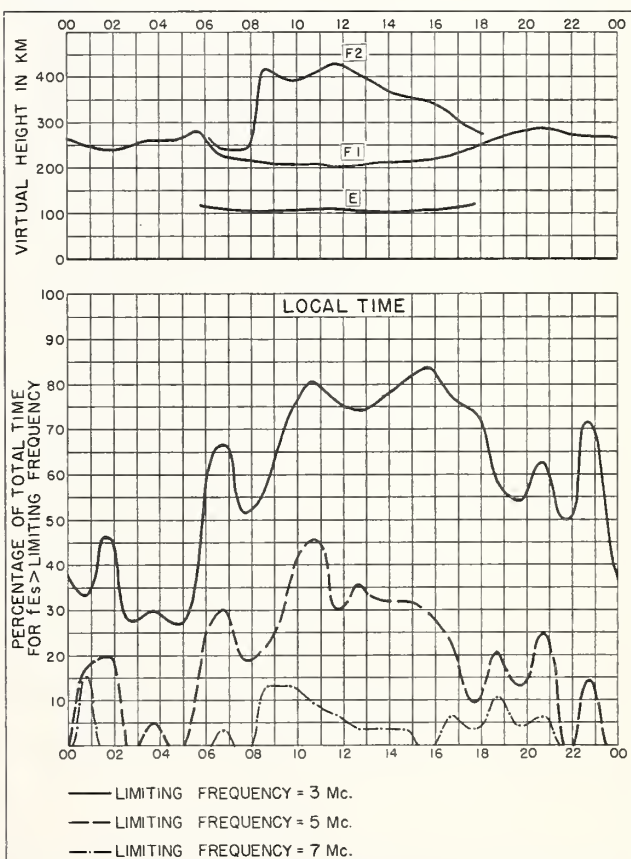


Fig. 24. PANAMA CANAL ZONE

JULY 1956

NBS 490

N. S. INTERNATIONAL RESEARCH OFFICE 212077

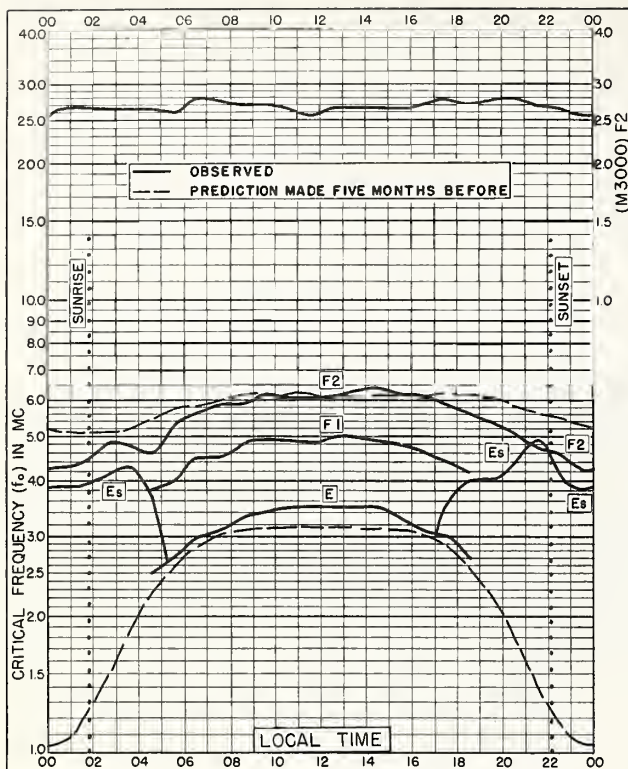


Fig. 25. REYKJAVIK, ICELAND
64.1°N, 21.8°W

JUNE 1956

NBS 503

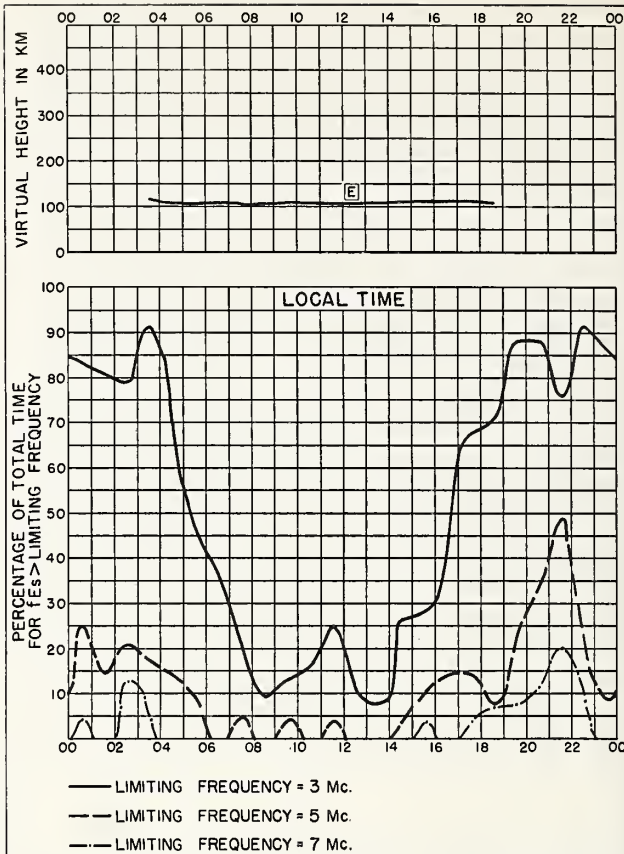


Fig. 26. REYKJAVIK, ICELAND

JUNE 1956

NBS 490

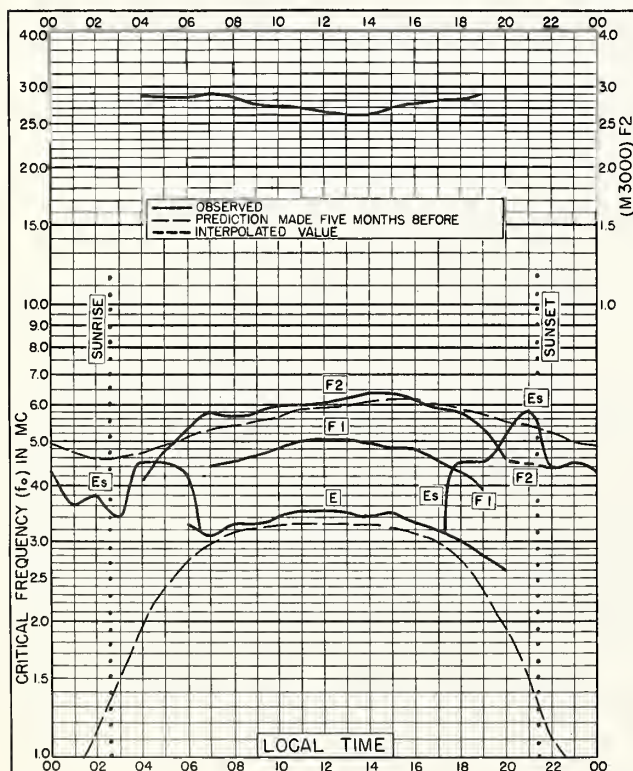


Fig. 27. NARSARSSUAK, GREENLAND
61.2°N, 45.4°W

JUNE 1956

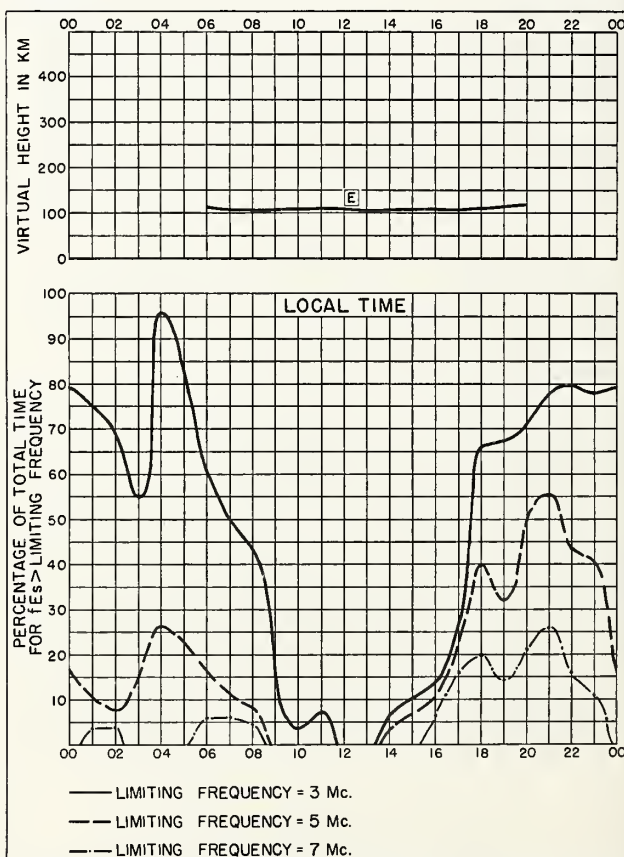


Fig. 28. NARSARSSUAK, GREENLAND

JUNE 1956

NBS 490

NBS 490

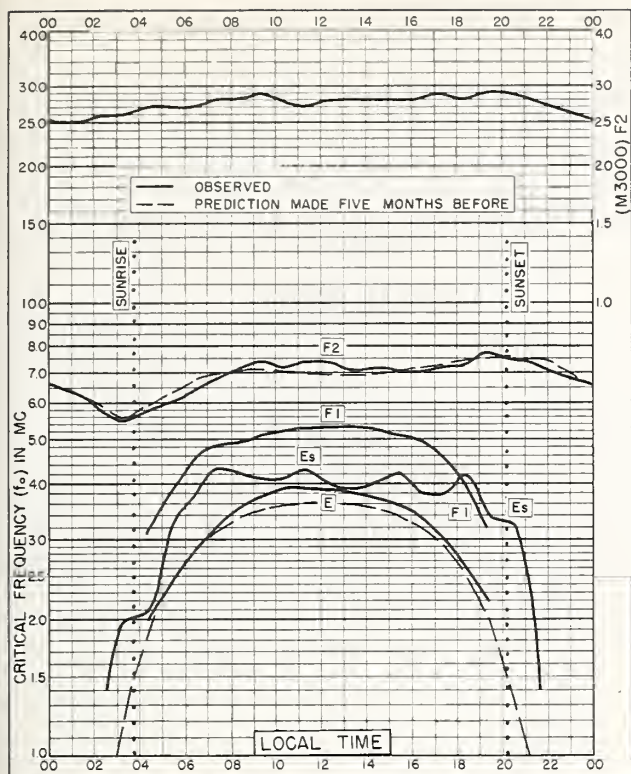


Fig. 29. De BILT, HOLLAND
52.1°N, 5.2°E

JUNE 1956

NBS 503

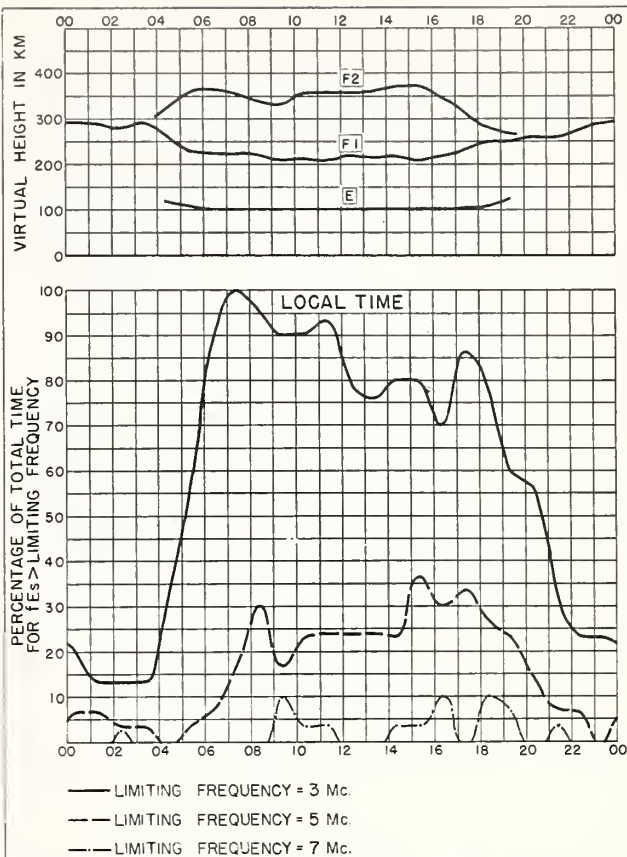


Fig. 30. De BILT, HOLLAND

JUNE 1956

NBS 490

N. A. GERTZMAN ET AL. (1956) 1007

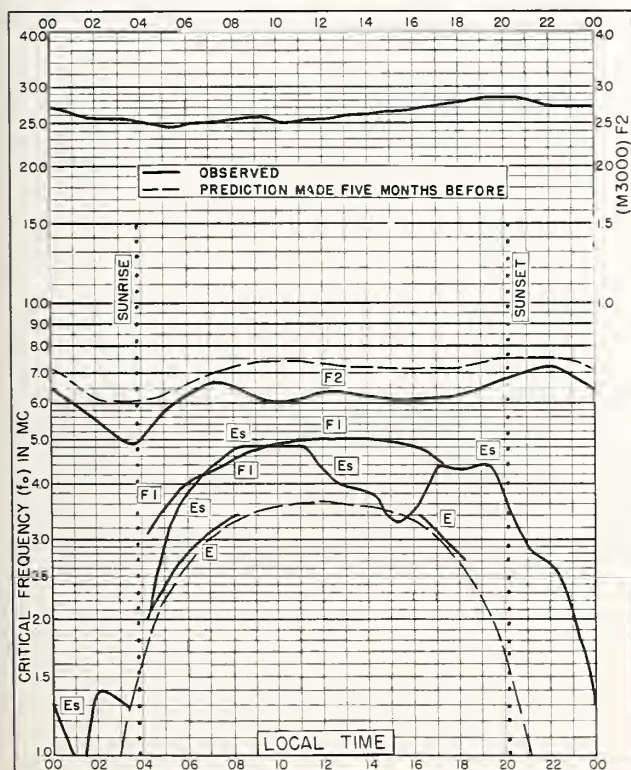


Fig. 31. ADAK, ALASKA
51.9°N, 176.6°W

JUNE 1956

NBS 503

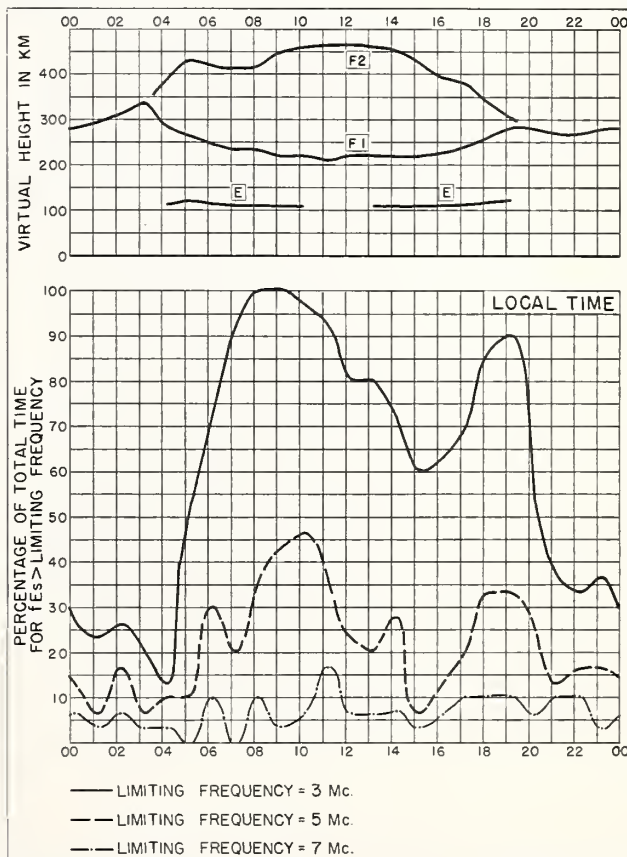
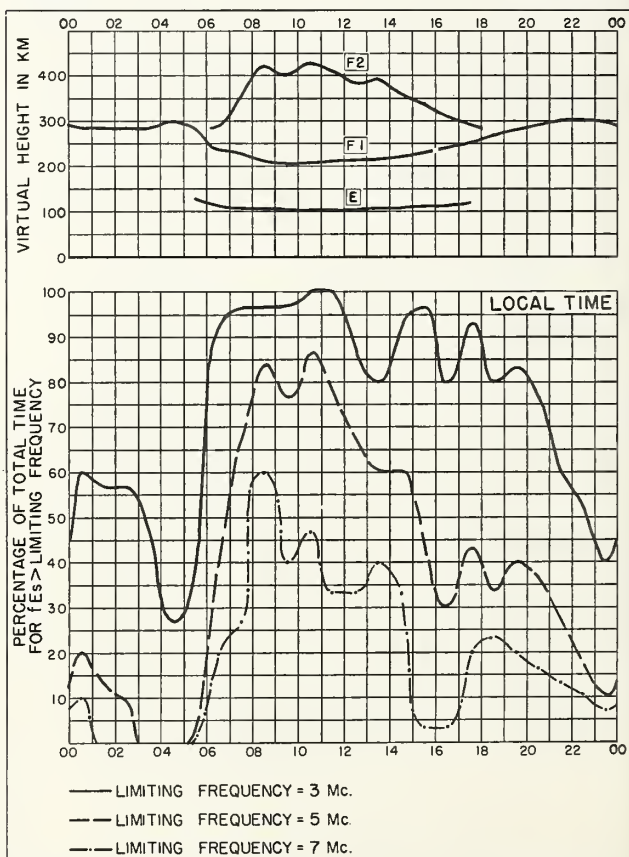
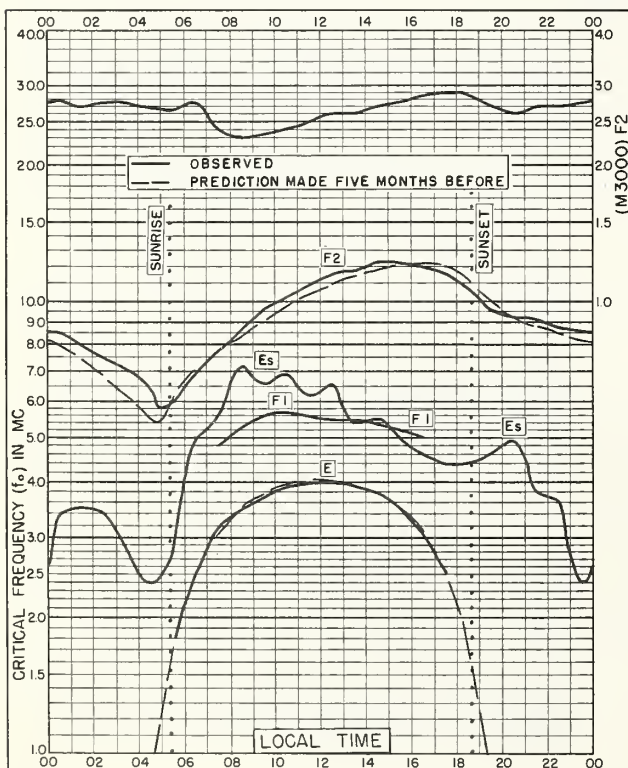
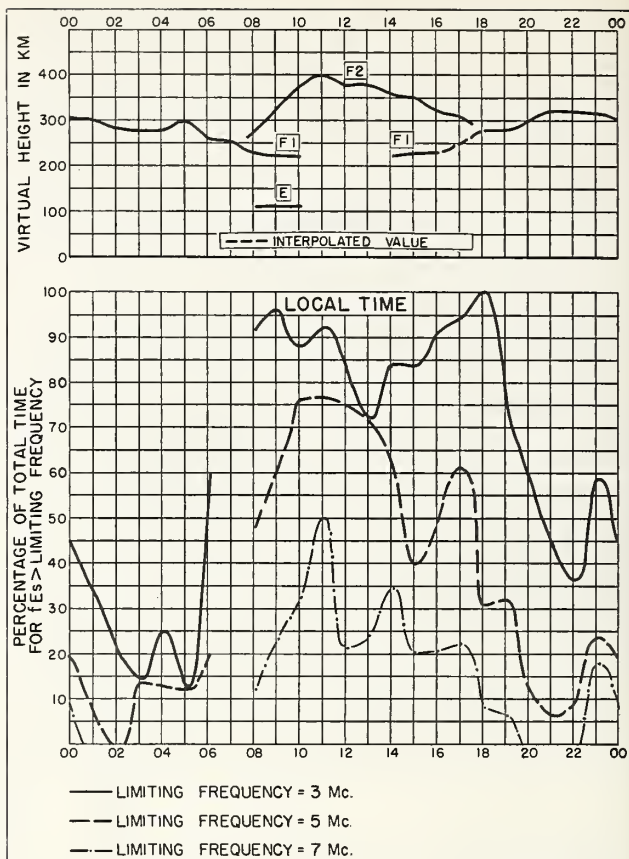
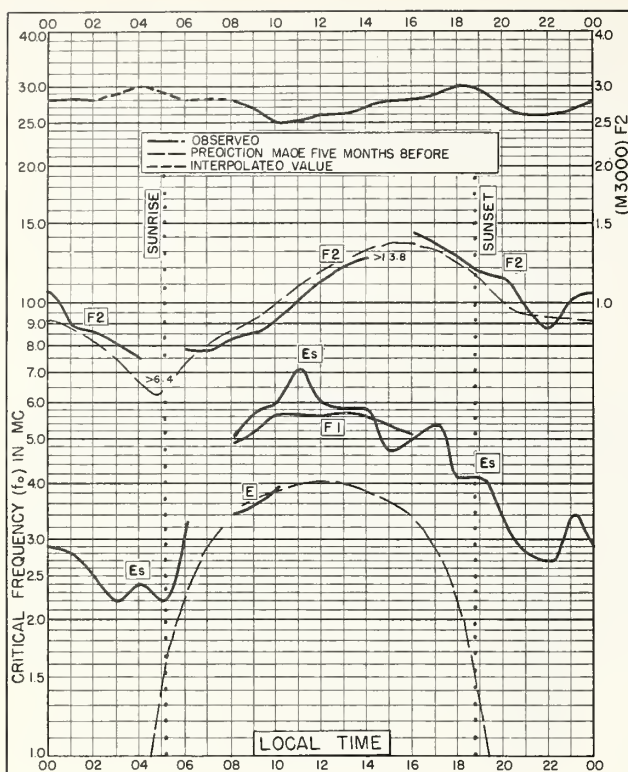


Fig. 32. ADAK, ALASKA

JUNE 1956

NBS 490

N. A. GERTZMAN ET AL. (1956) 1007



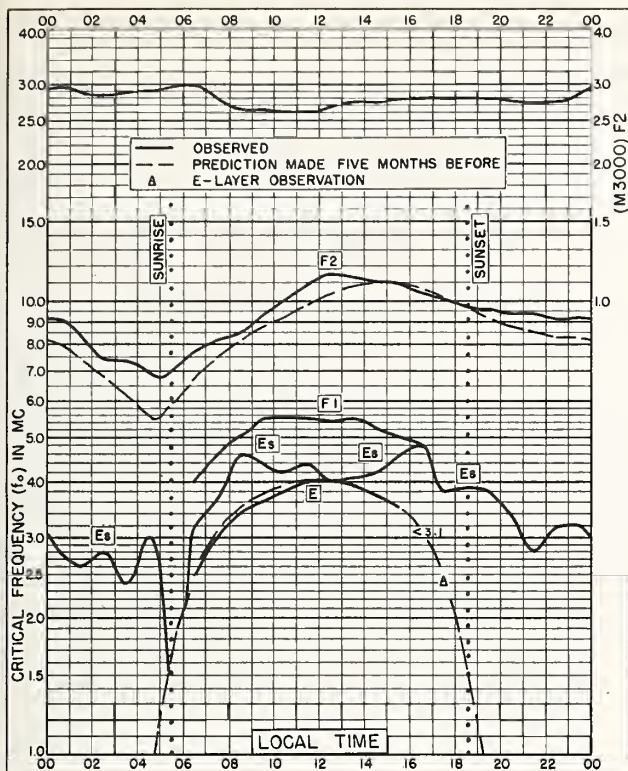


Fig. 37. PUERTO RICO, W. I.
18.5°N, 67.2°W

JUNE 1956

NBS 503

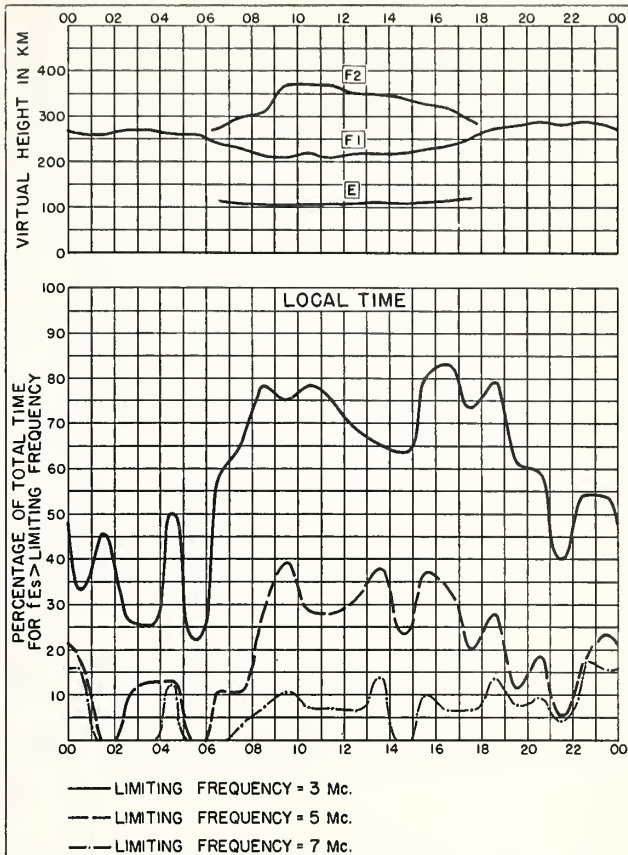


Fig. 38. PUERTO RICO, W. I.

JUNE 1956

NBS 490

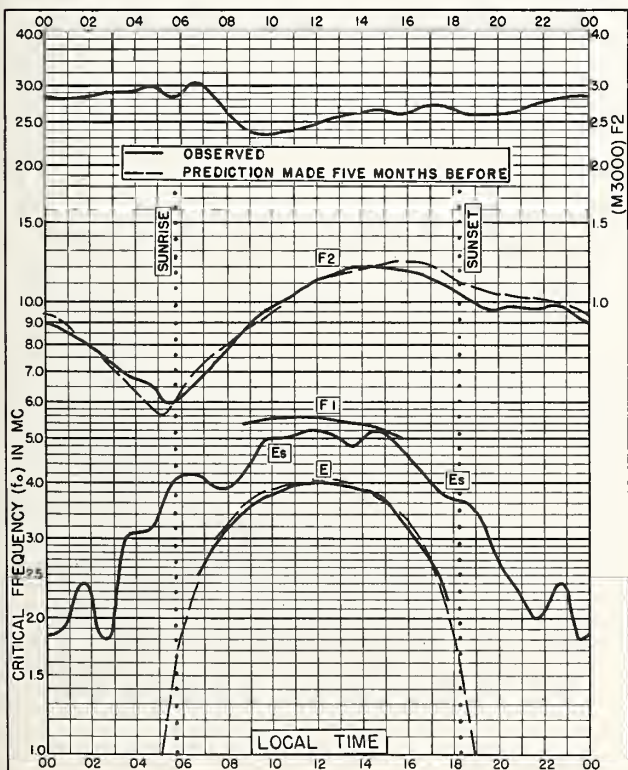


Fig. 39. PANAMA CANAL ZONE
9.4°N, 79.9°W

JUNE 1956

NBS 503

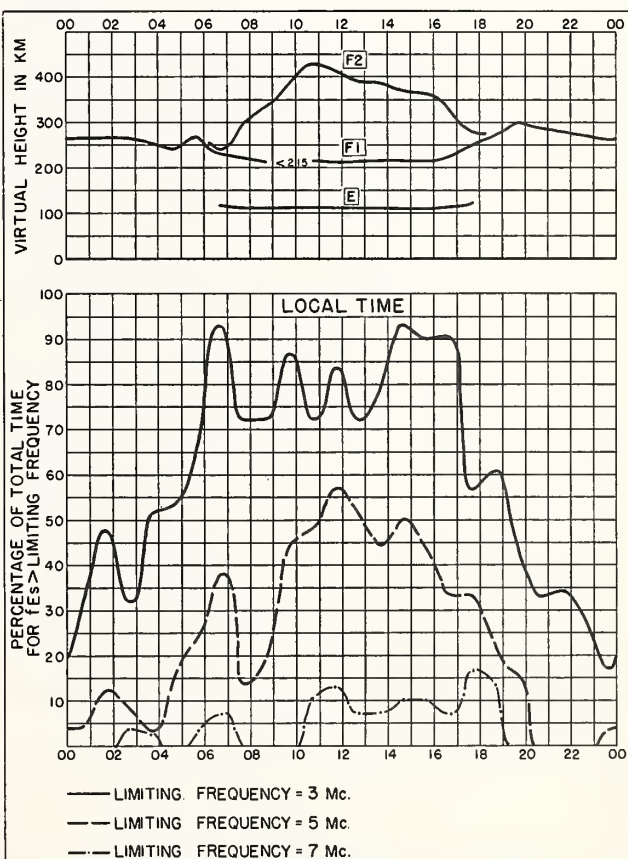


Fig. 40. PANAMA CANAL ZONE

JUNE 1956

NBS 490

NBS 490

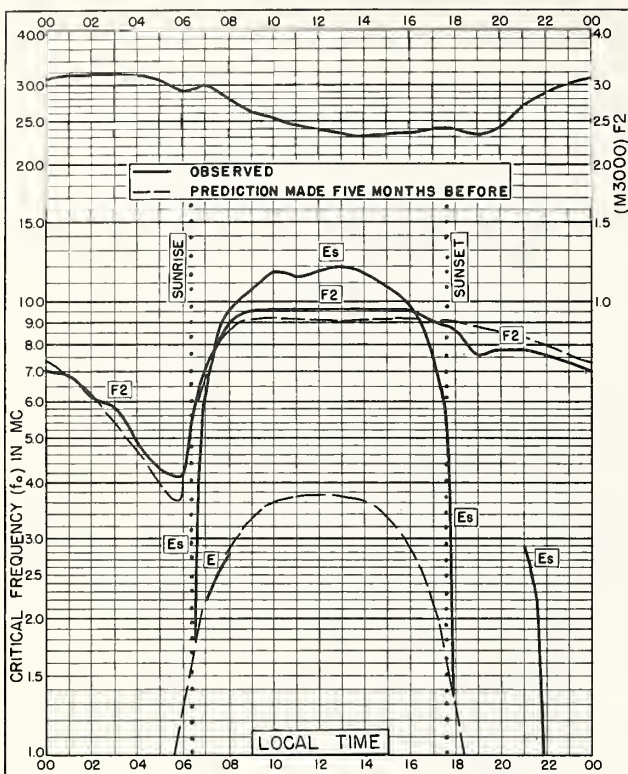


Fig. 41. HUANCAYO, PERU
12.0°S, 75.3°W

JUNE 1956

NBS 803

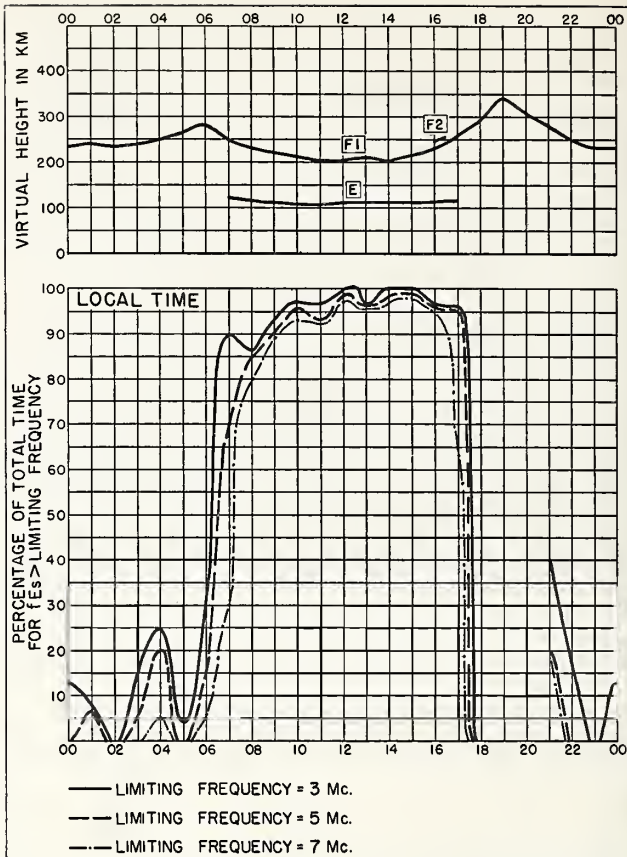


Fig. 42. HUANCAYO, PERU

JUNE 1956

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

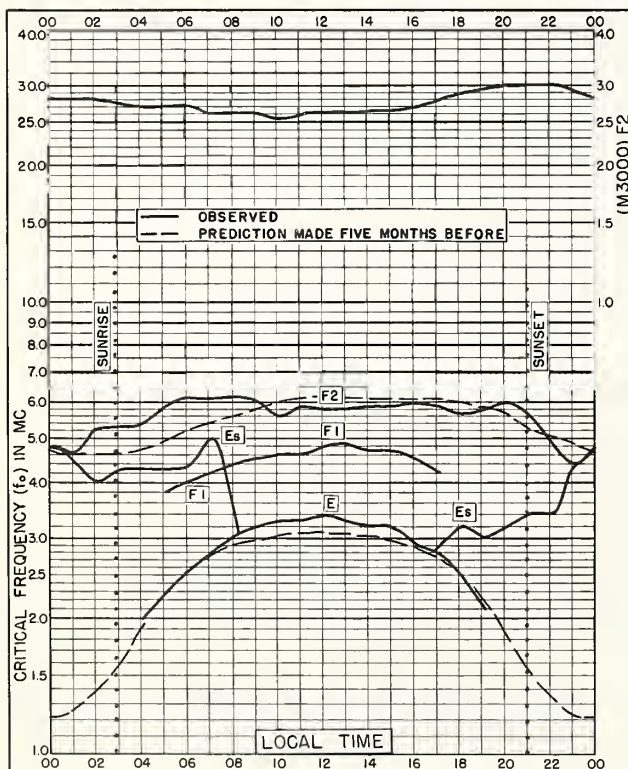


Fig. 43. FAIRBANKS, ALASKA
64.9°N, 147.8°W

MAY 1956

NBS 503

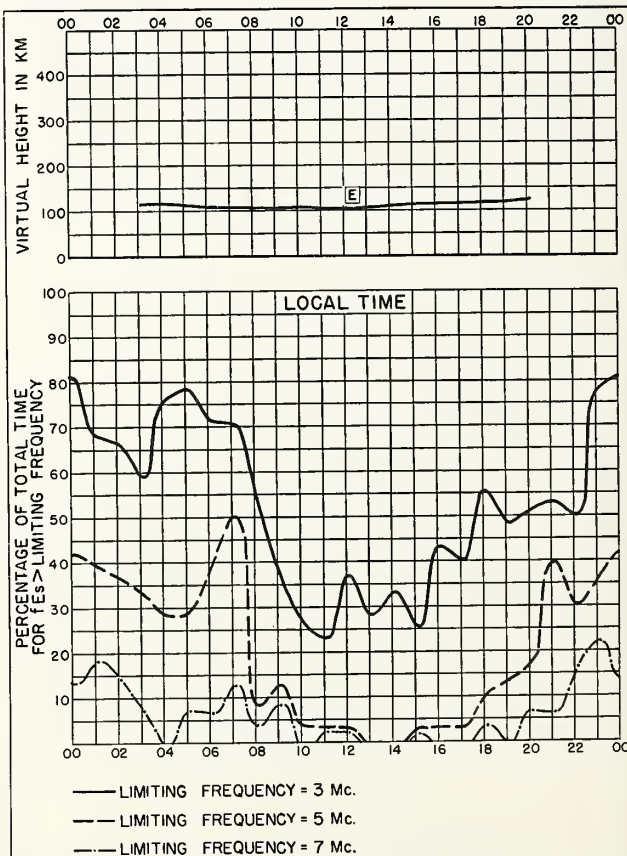


Fig. 44. FAIRBANKS, ALASKA

MAY 1956

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

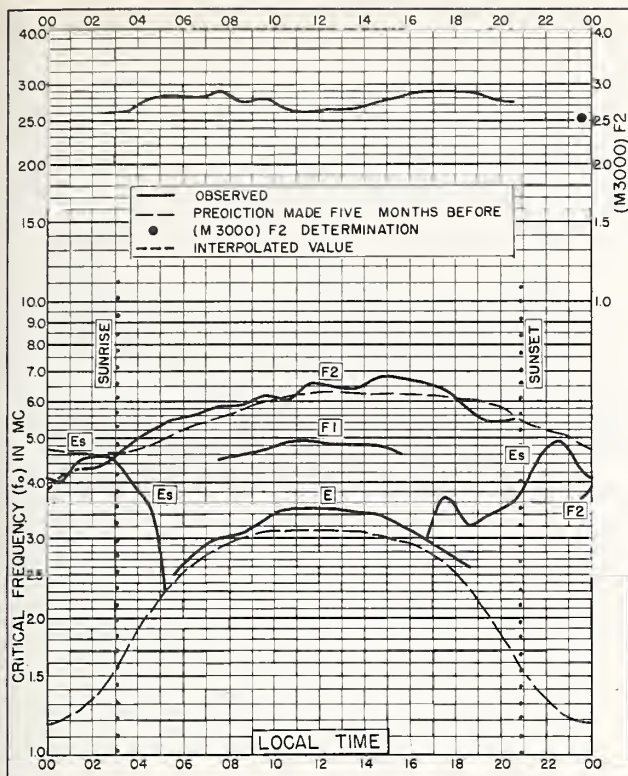


Fig. 45. REYKJAVIK, ICELAND
64.1°N, 21.8°W

MAY 1956

NBS 503

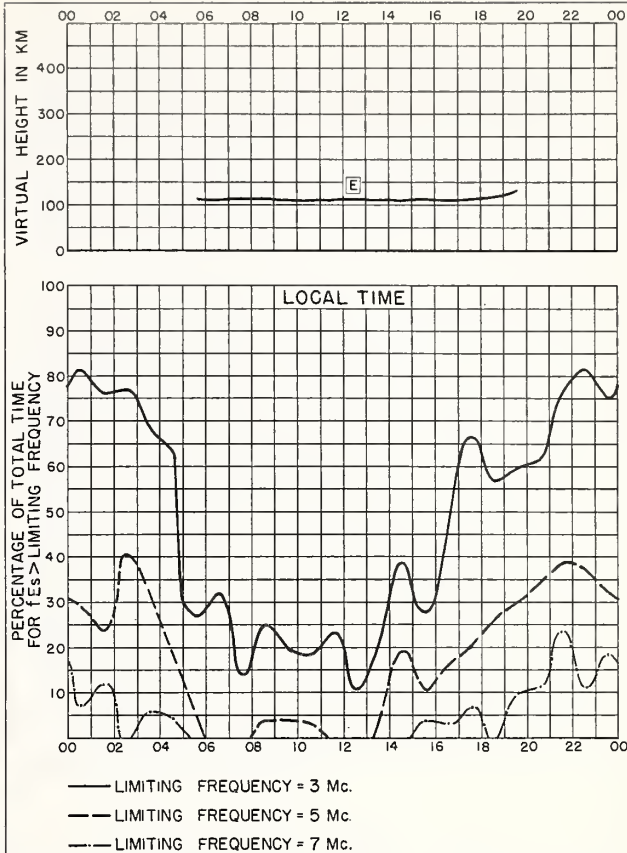


Fig. 46. REYKJAVIK, ICELAND

MAY 1956

NBS 490

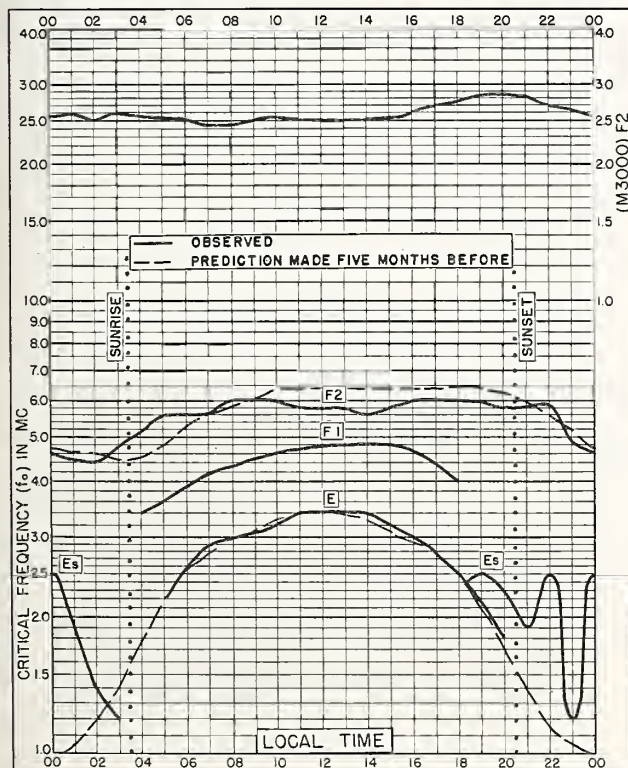


Fig. 47. ANCHORAGE, ALASKA
61.2°N, 149.9°W

MAY 1956

NBS 503

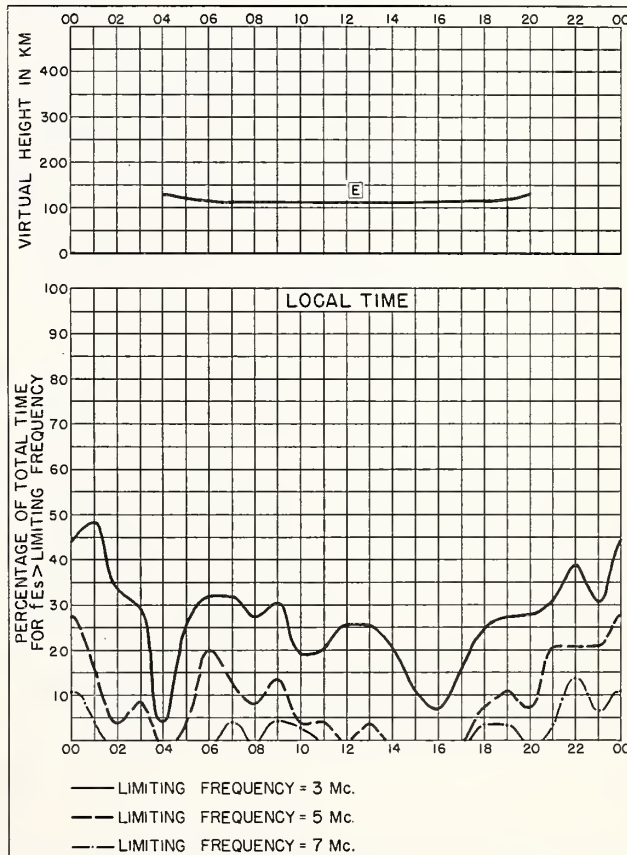


Fig. 48. ANCHORAGE, ALASKA

MAY 1956

NBS 490

N. S. INTERNATIONAL PHYSICAL OFFICE 213877

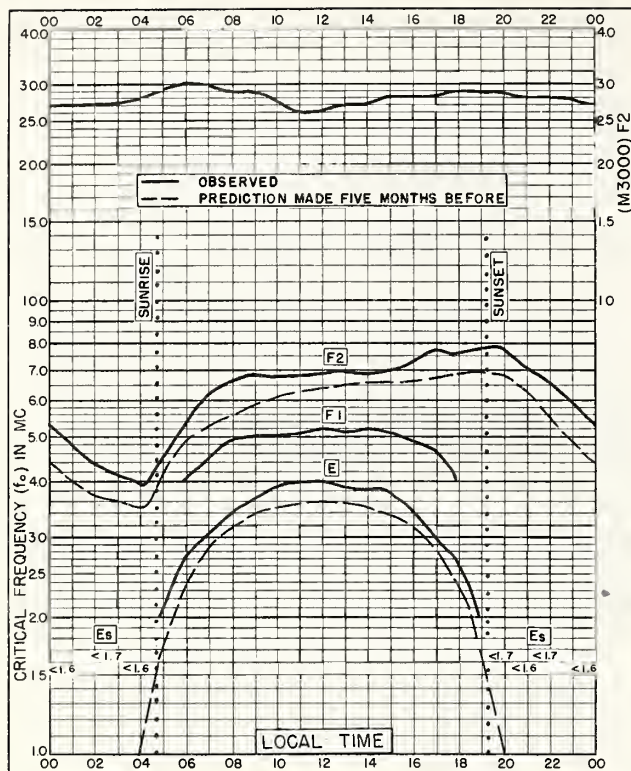


Fig. 49. OTTAWA, CANADA
45.4°N, 75.9°W

MAY 1956

NBS 503

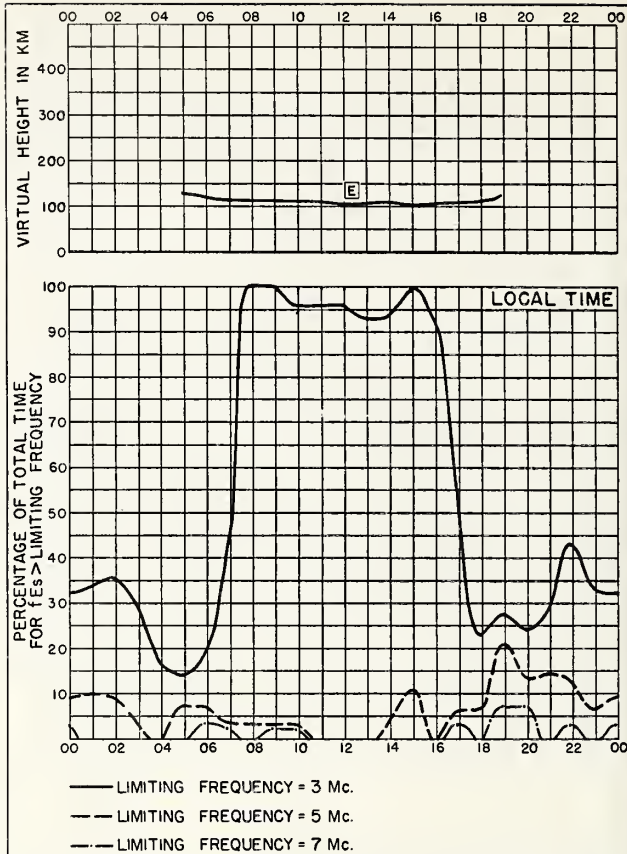


Fig. 50. OTTAWA, CANADA

MAY 1956

NBS 490

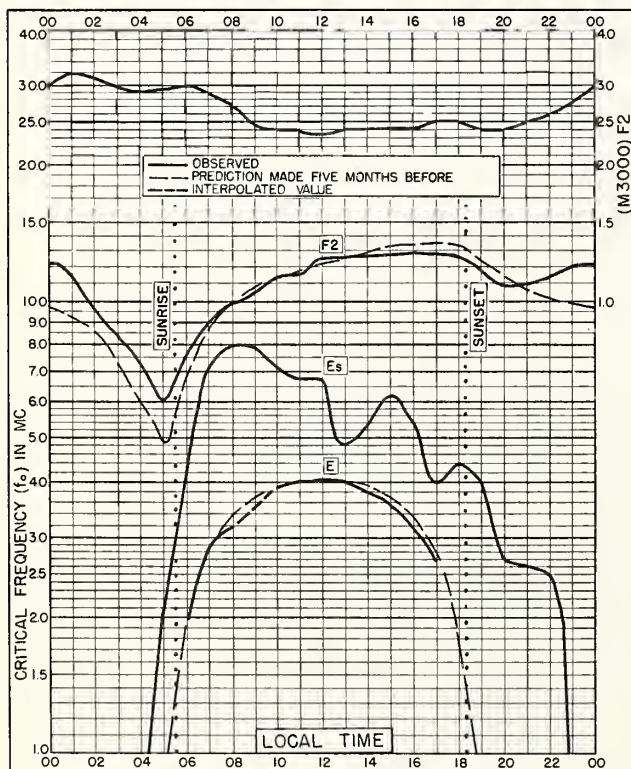


Fig. 51. BAGUIO, P. I.
16.4°N, 120.6°E

MAY 1956

NBS 503

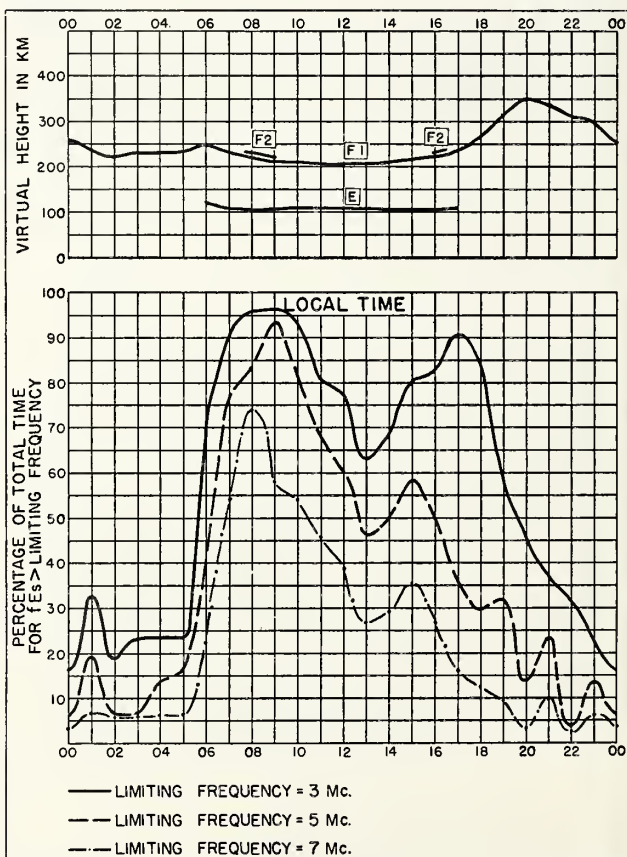


Fig. 52. BAGUIO, P. I.

MAY 1956

NBS 490

NBS 490

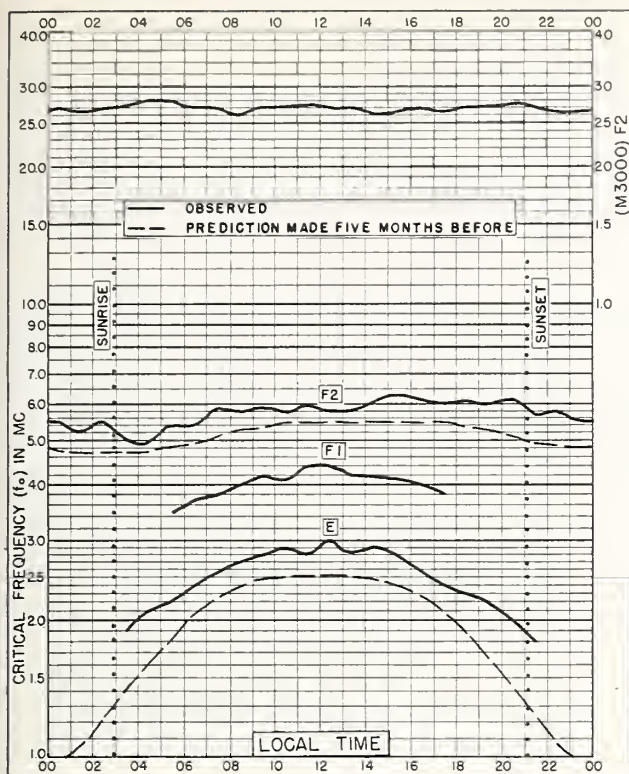


Fig. 53. THULE, GREENLAND
77.0°N, 69.0°W

APRIL 1956

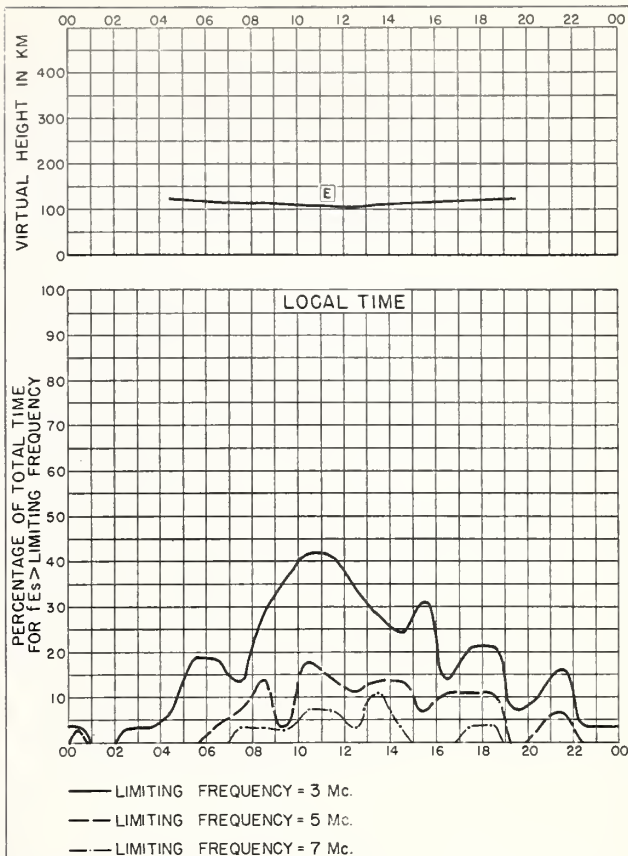


Fig. 54. THULE, GREENLAND

APRIL 1956

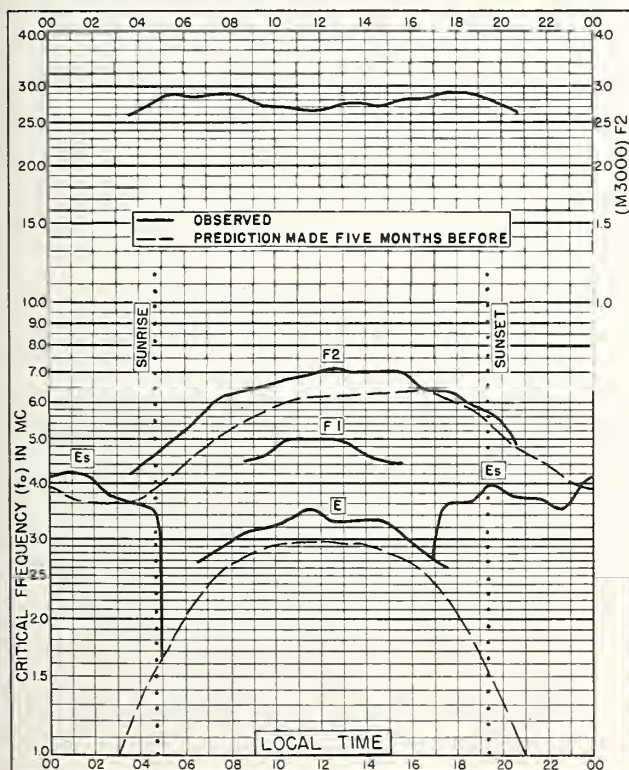


Fig. 55. REYKJAVIK, ICELAND
64.1°N, 21.8°W

APRIL 1956

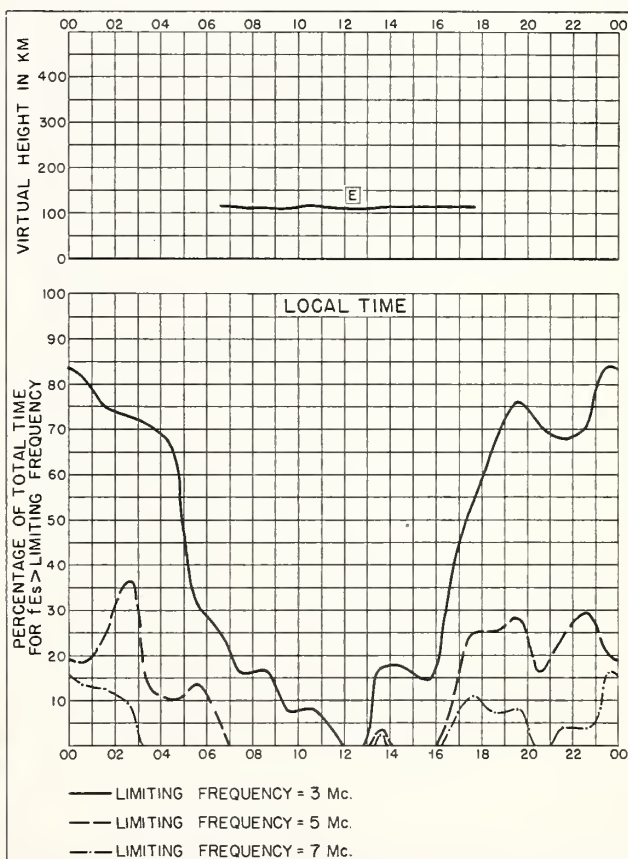


Fig. 56. REYKJAVIK, ICELAND

APRIL 1956

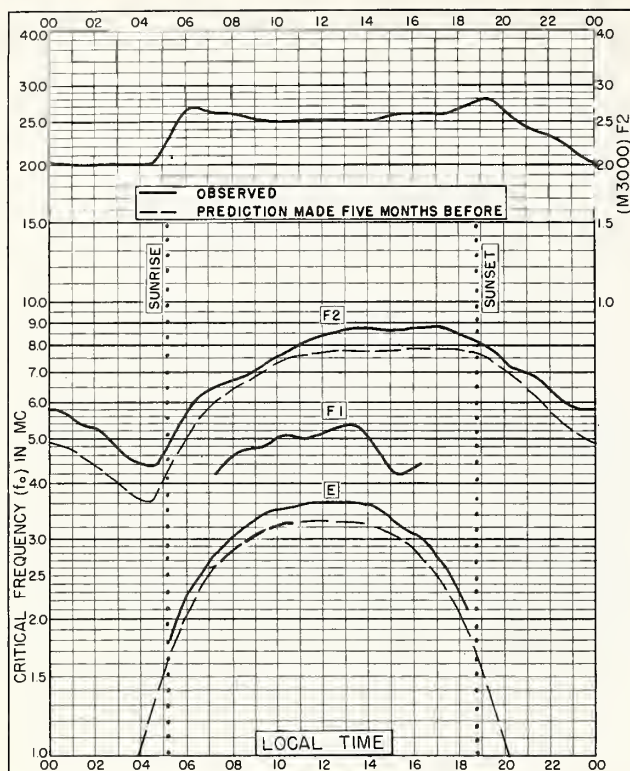


Fig. 57. De BILT, HOLLAND
52.1°N, 5.2°E

APRIL 1956

NBS 503

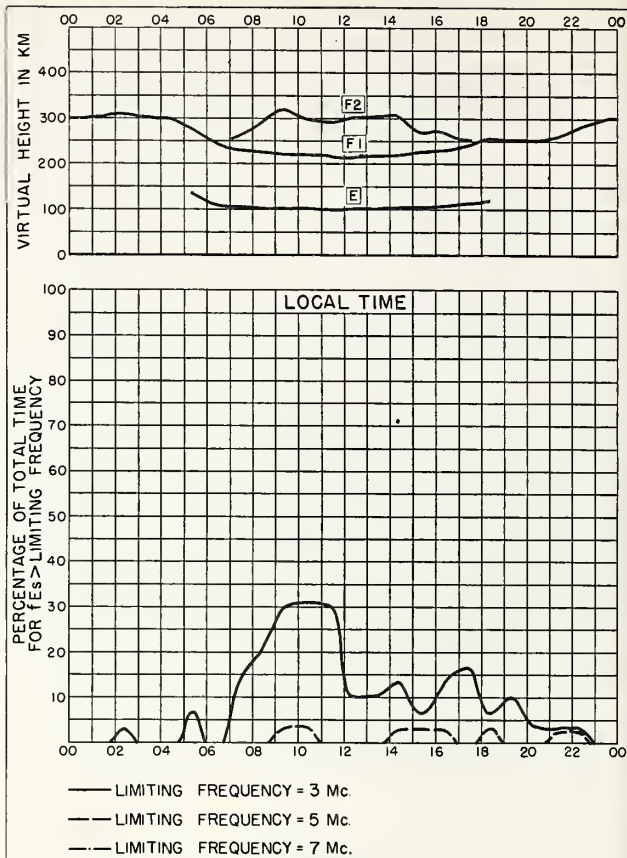


Fig. 58. De BILT, HOLLAND

APRIL 1956

NBS 490

N. S. INTERNATIONAL PHYSICS OFFICE 51077

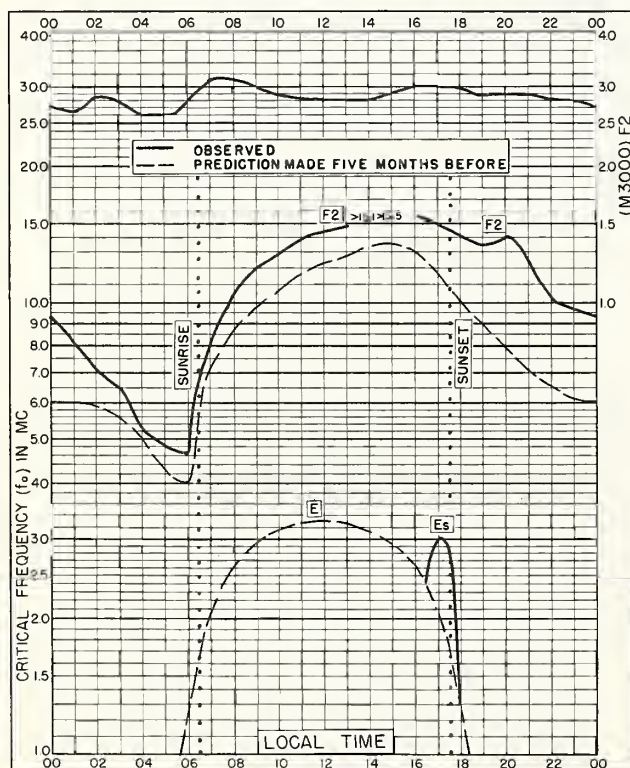


Fig. 59. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W

APRIL 1956

NBS 503

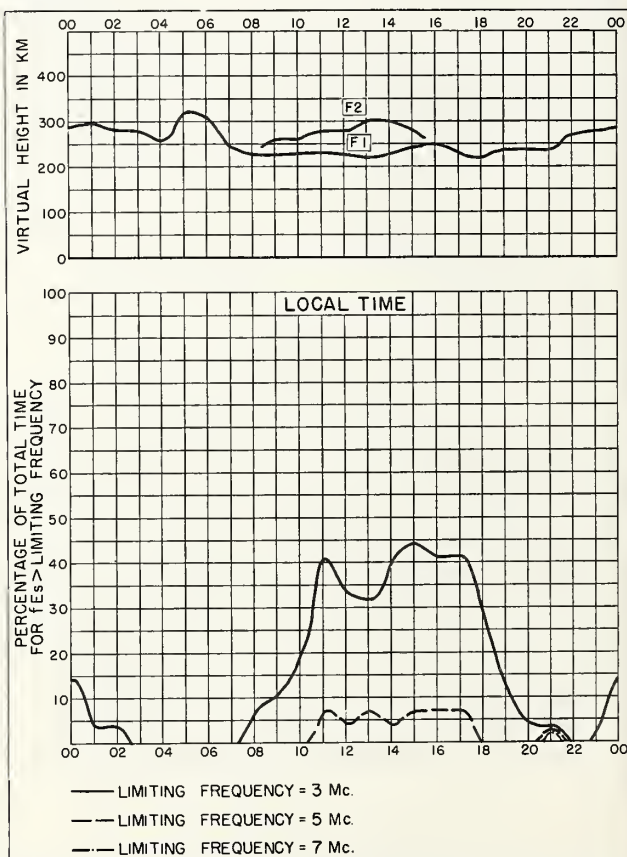


Fig. 60. BUENOS AIRES, ARGENTINA

APRIL 1956

NBS 490

N. S. INTERNATIONAL PHYSICS OFFICE 51077

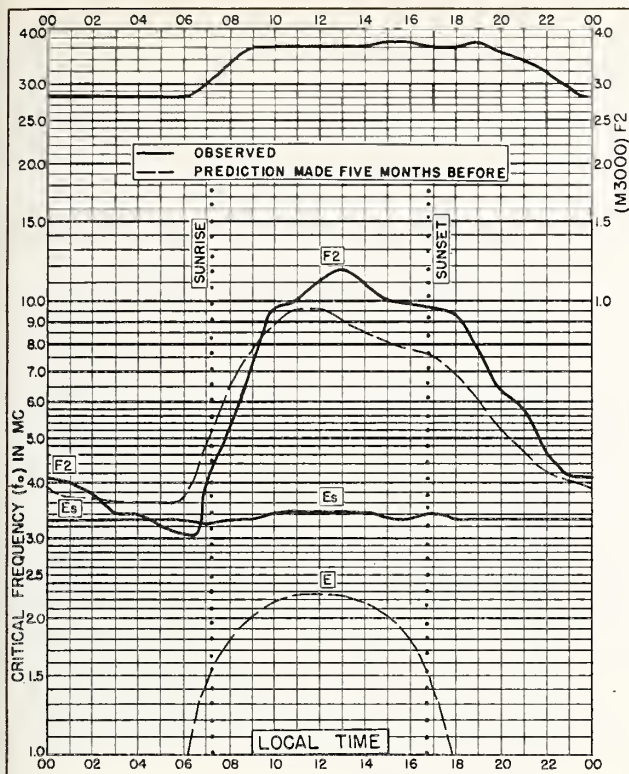


Fig. 61. DECEPCION I.
63.0°S, 60.7°W

APRIL 1956

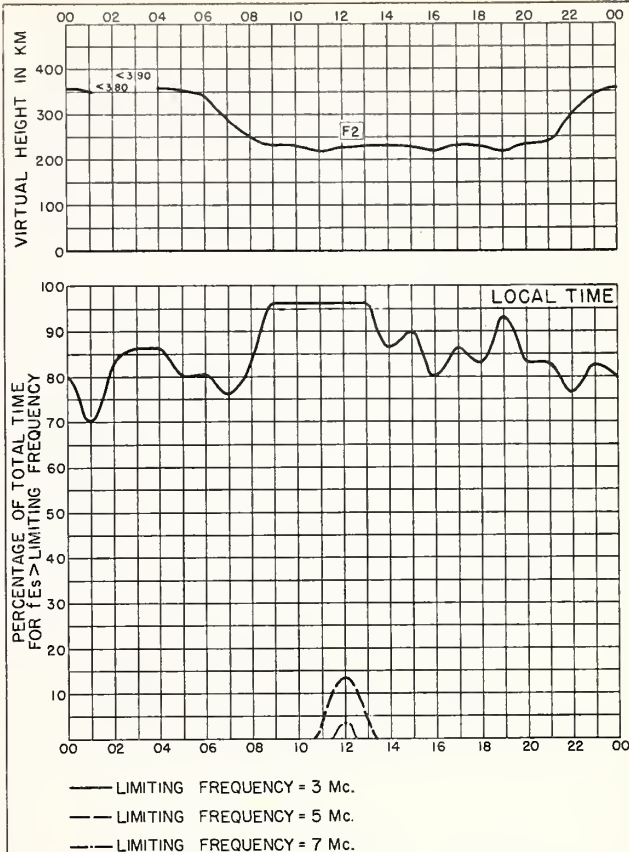


Fig. 62. DECEPCION I.

APRIL 1956

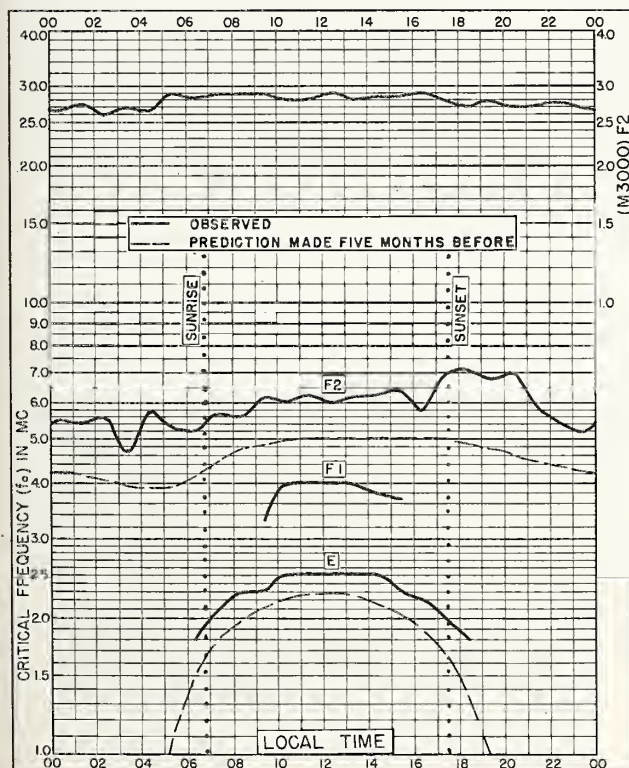


Fig. 63. THULE, GREENLAND
77.0°N, 69.0°W

MARCH 1956

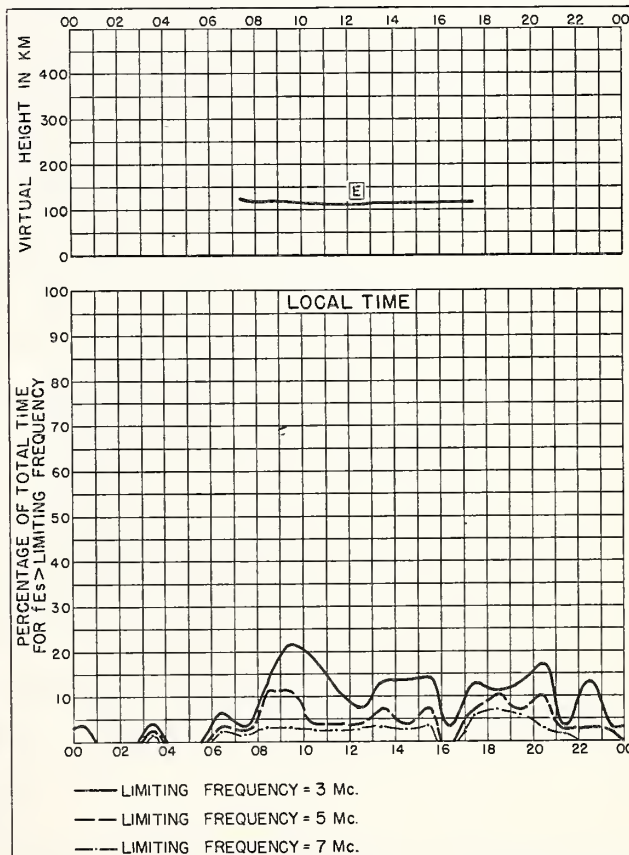
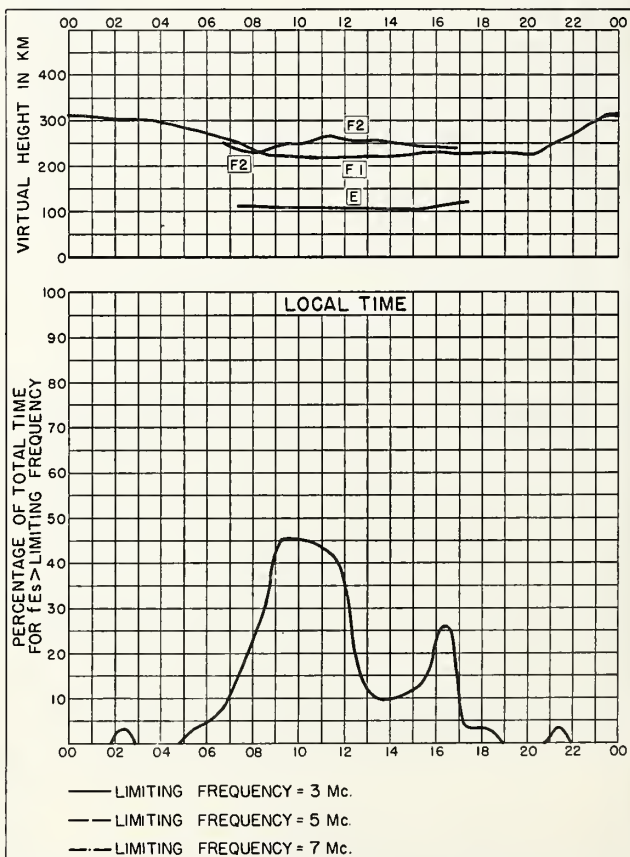
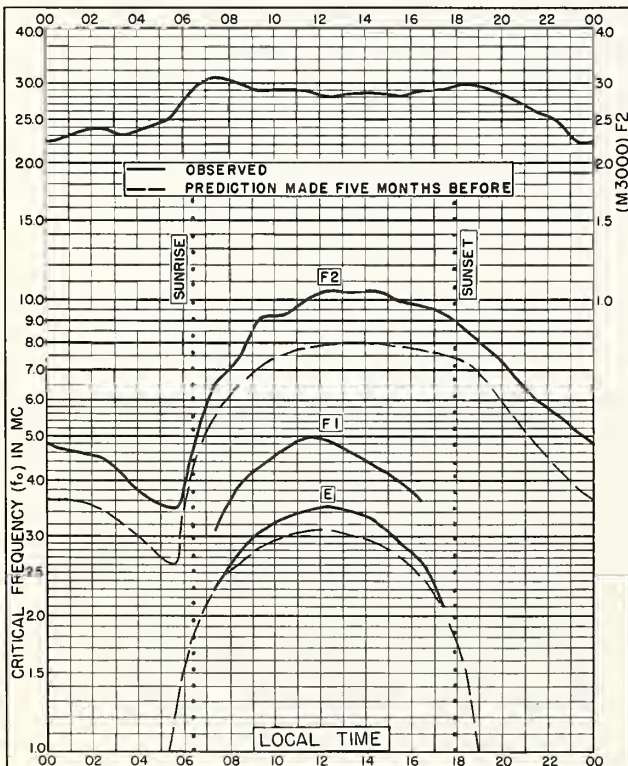
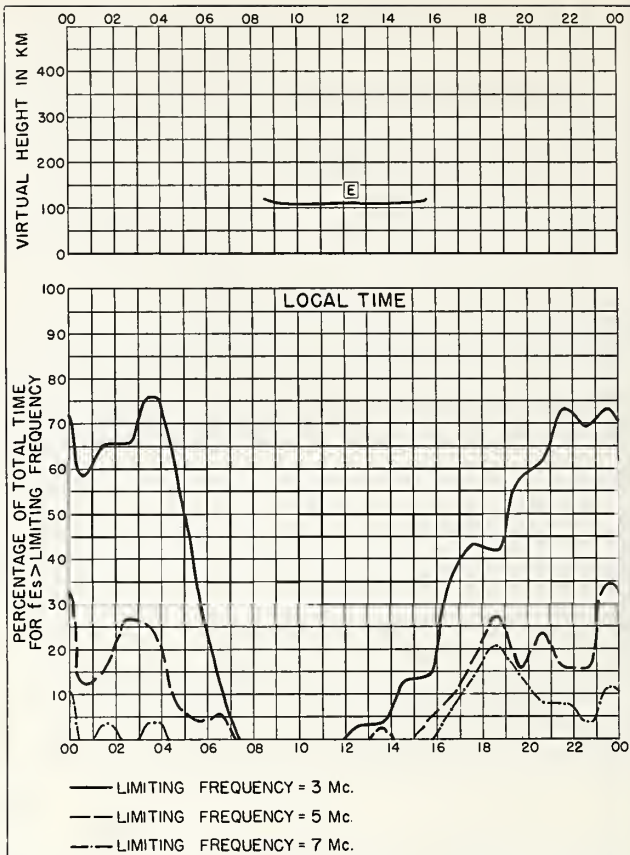
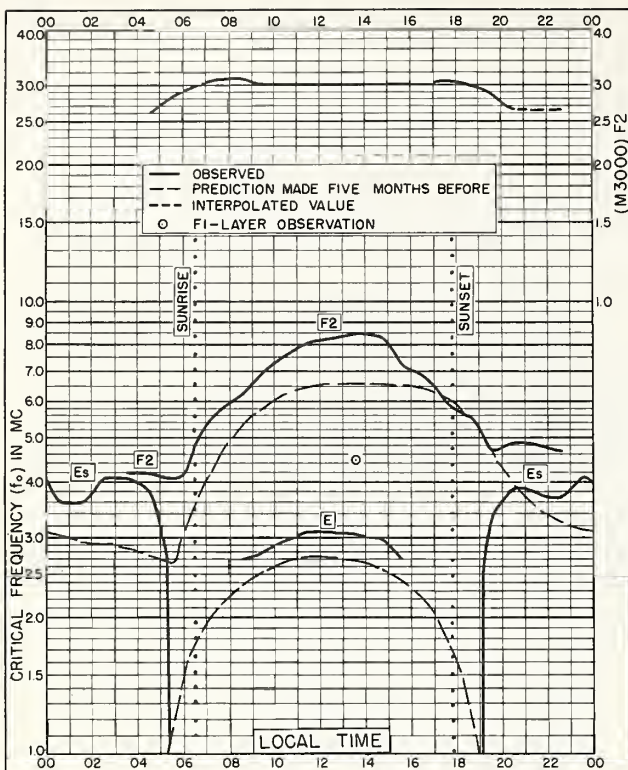
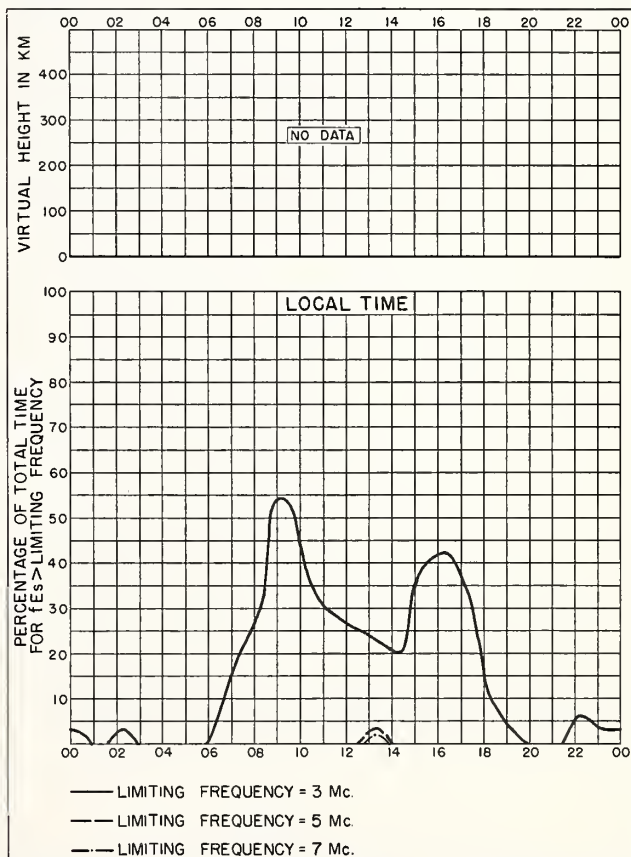
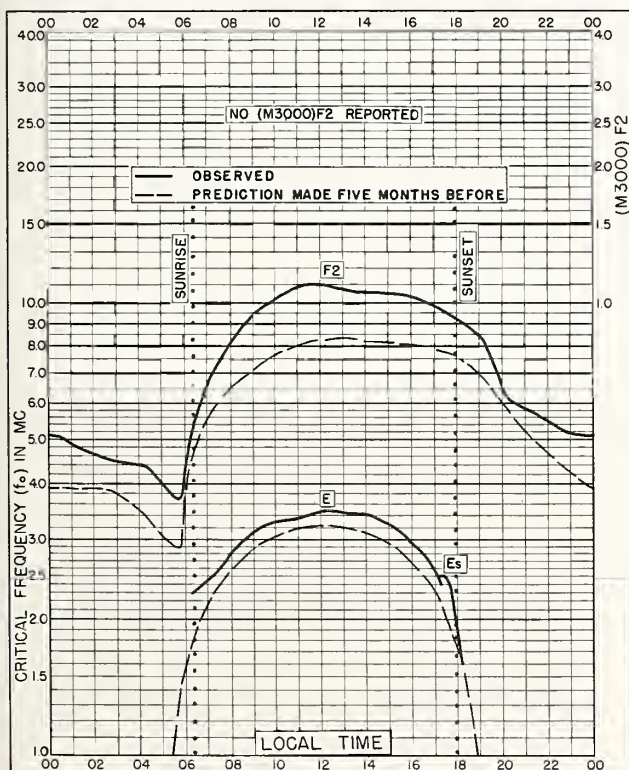
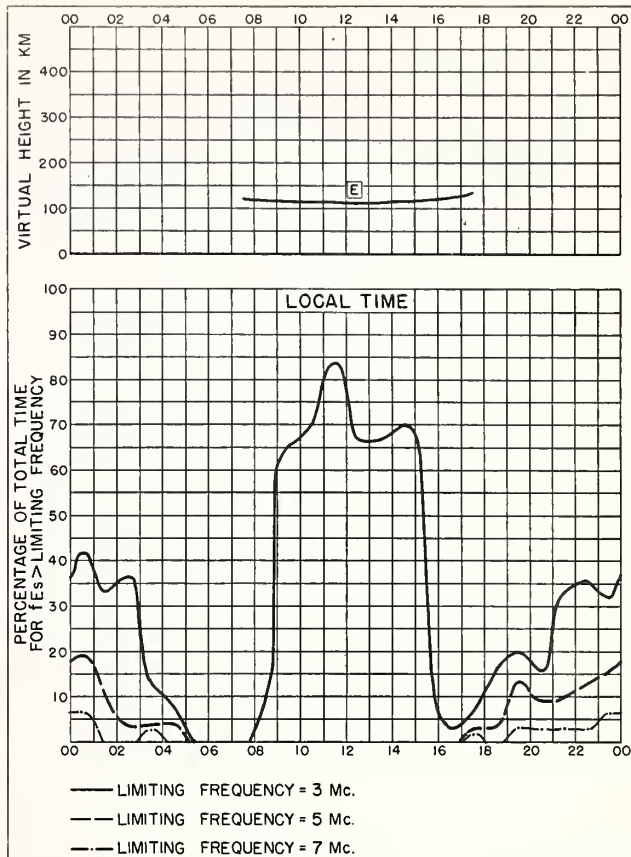
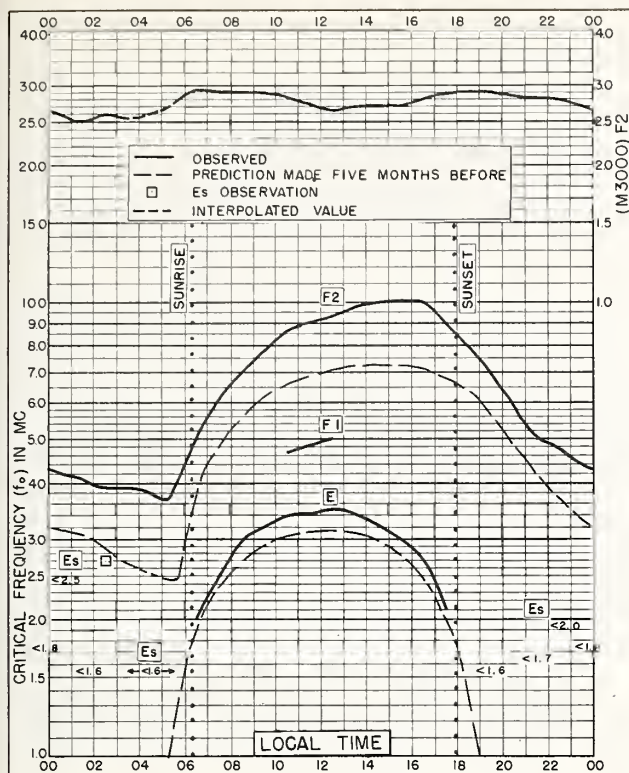


Fig. 64. THULE, GREENLAND

MARCH 1956





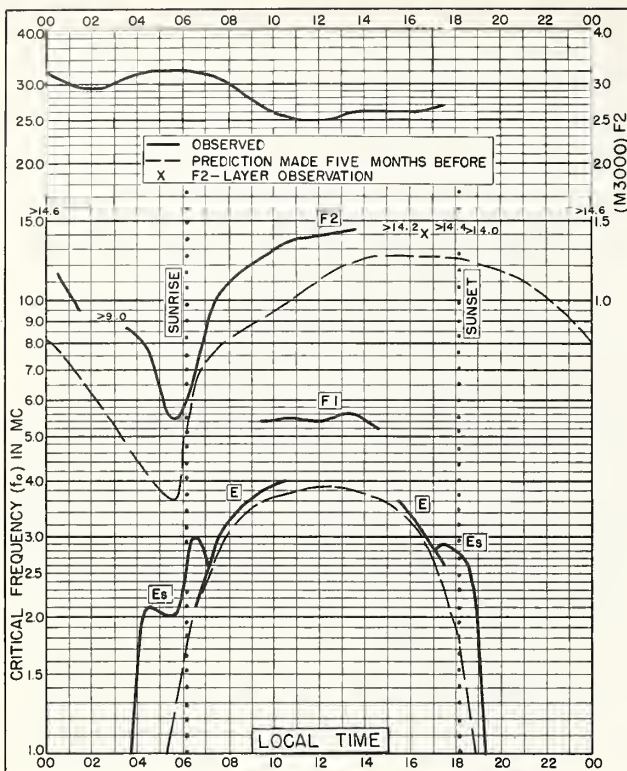


Fig. 73. NAIROBI, KENYA
1.3°S, 36.8°E

MARCH 1956

NBS 503

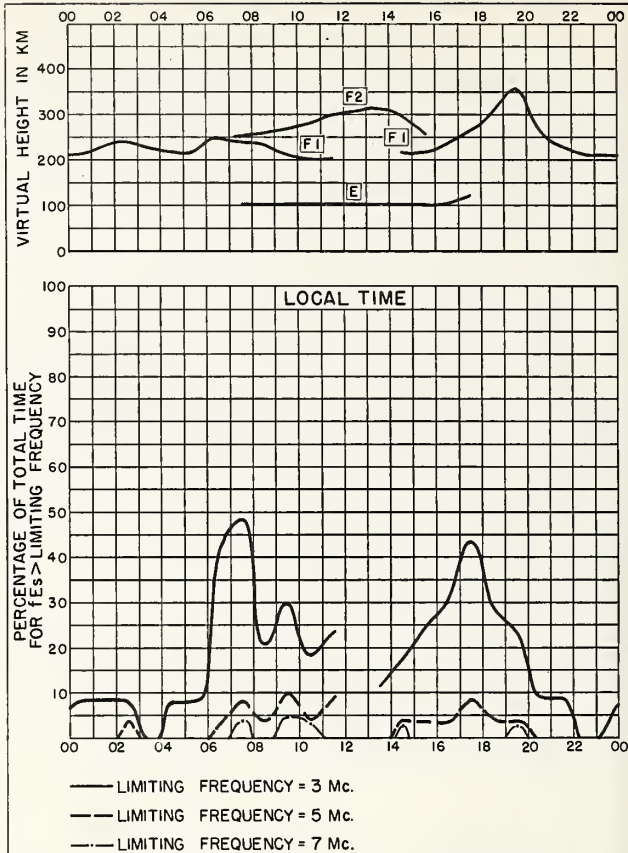


Fig. 74. NAIROBI, KENYA

MARCH 1956

NBS 490

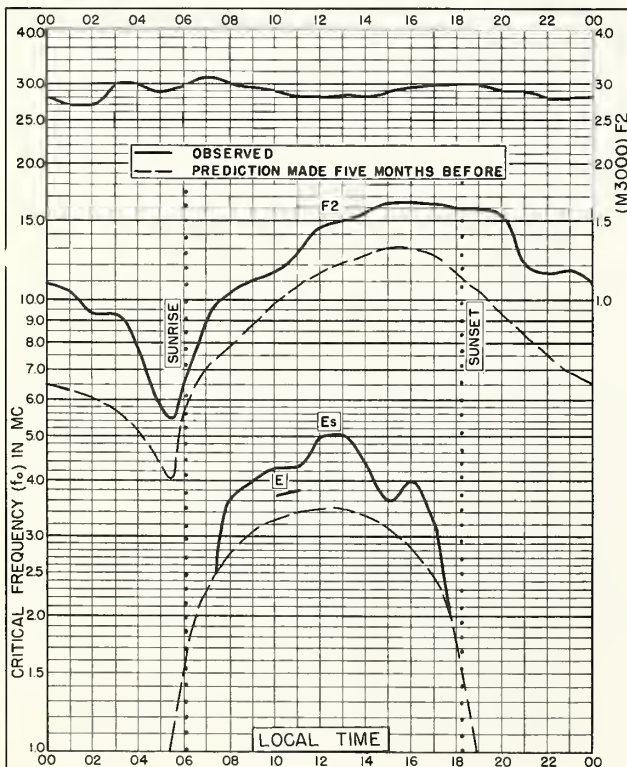


Fig. 75. BUENOS AIRES, ARGENTINA
34.5°S, 58.5°W

MARCH 1956

NBS 503

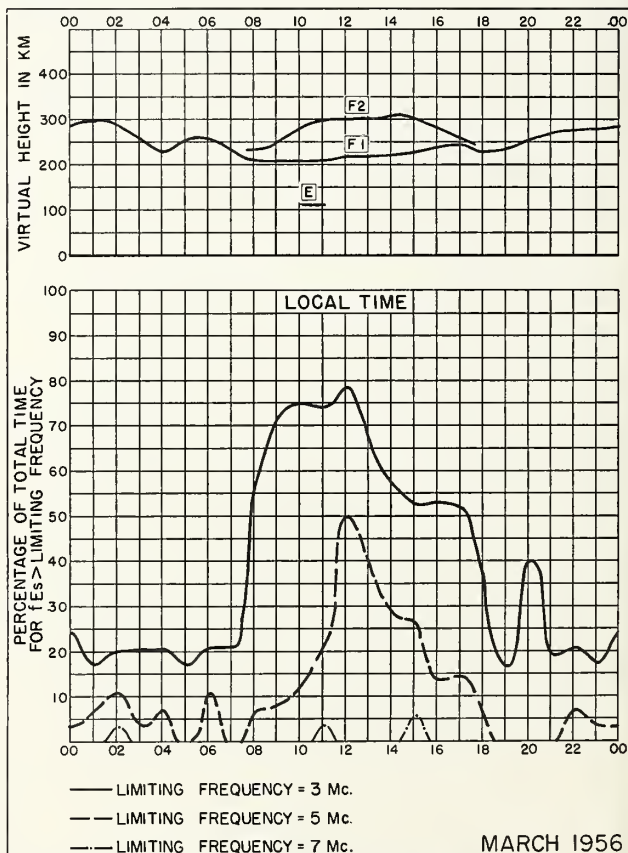


Fig. 76. BUENOS AIRES, ARGENTINA

MARCH 1956

NBS 490

NBS 490

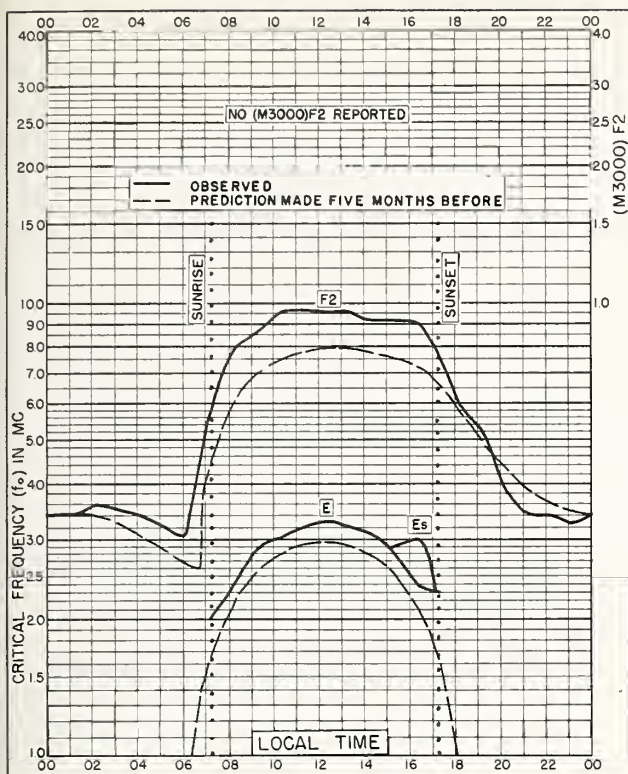


Fig. 77. BUDAPEST, HUNGARY
47.6°N, 19.0°E

FEBRUARY 1956

NBS 503

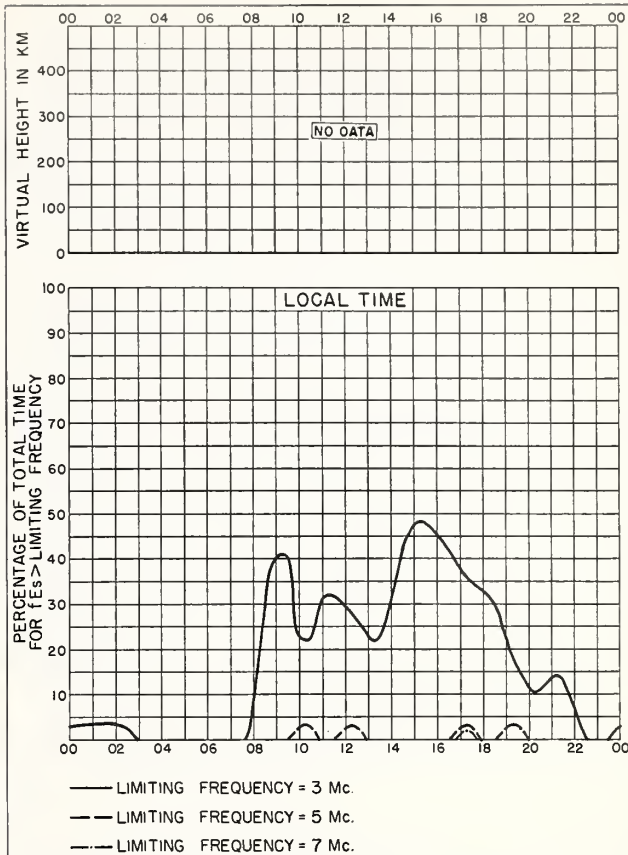


Fig. 78. BUDAPEST, HUNGARY FEBRUARY 1956

NBS 490

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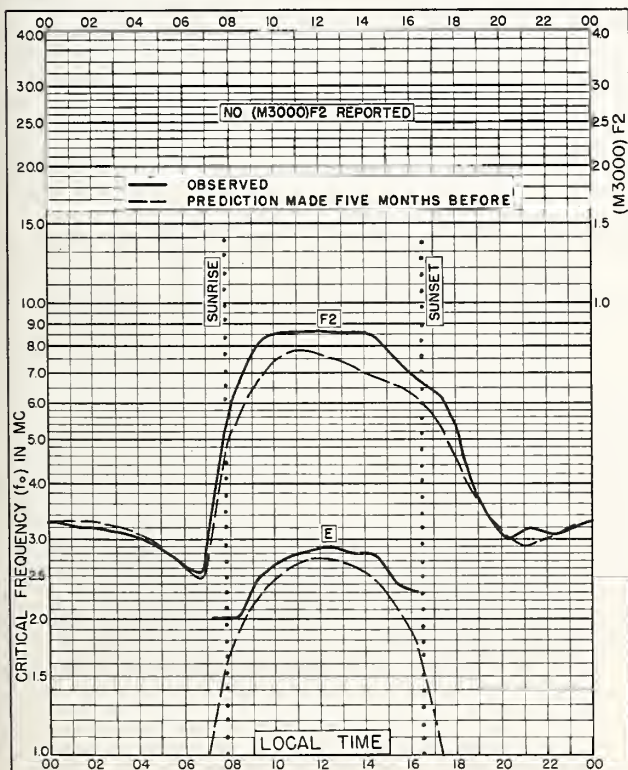


Fig. 79. BUDAPEST, HUNGARY
47.6°N, 19.0°E

JANUARY 1956

NBS 503

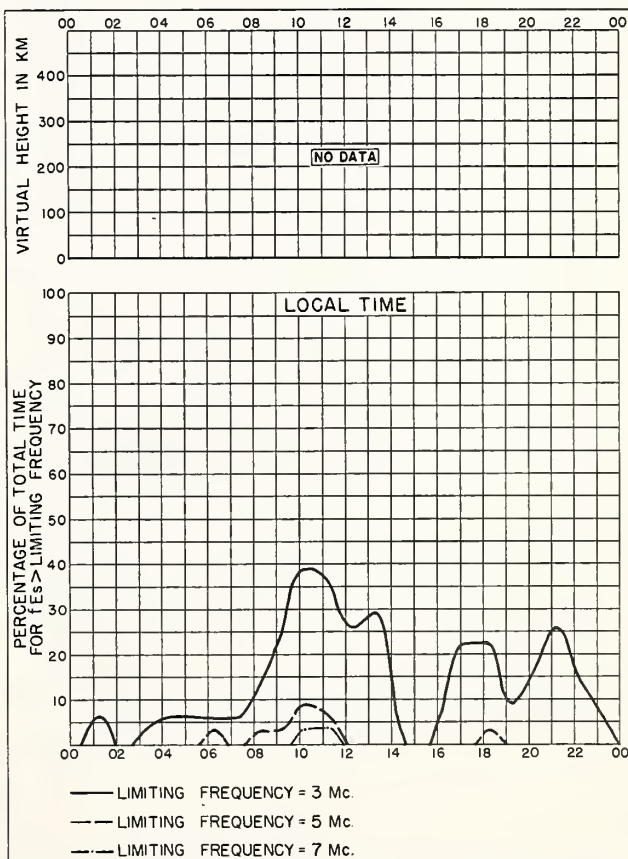


Fig. 80. BUDAPEST, HUNGARY

JANUARY 1956

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

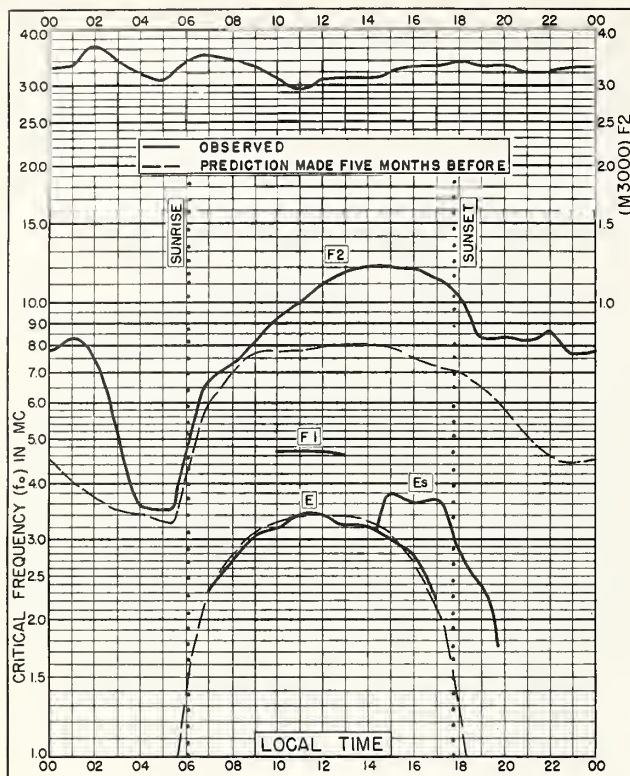


Fig. 81. SAO PAULO, BRAZIL
23.5°S, 46.5°W SEPTEMBER 1955

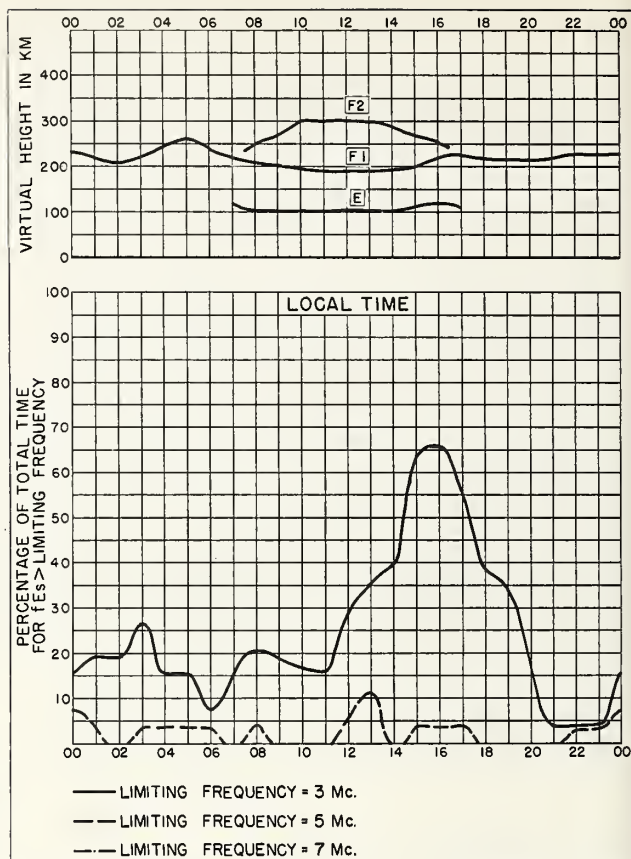


Fig. 82. SAO PAULO, BRAZIL SEPTEMBER 1955

NBS 490

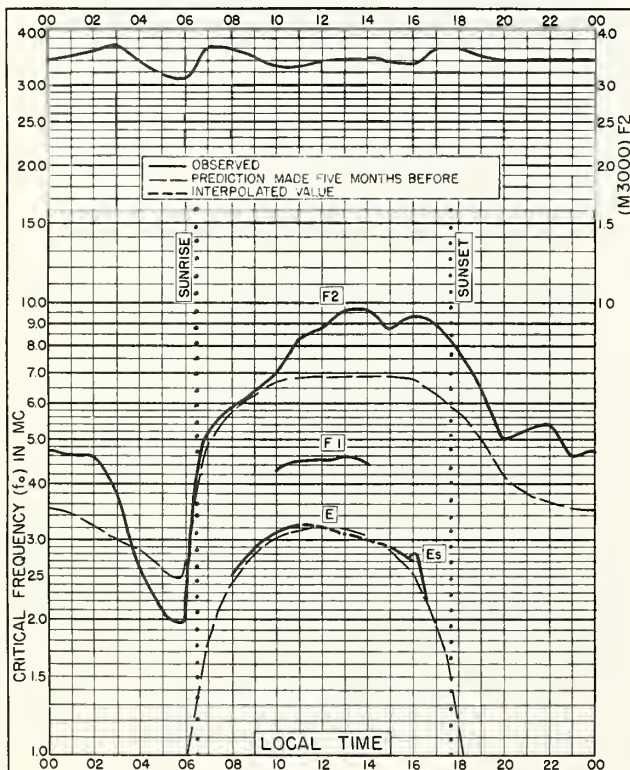


Fig. 83. SAO PAULO, BRAZIL
23.5°S, 46.5°W AUGUST 1955

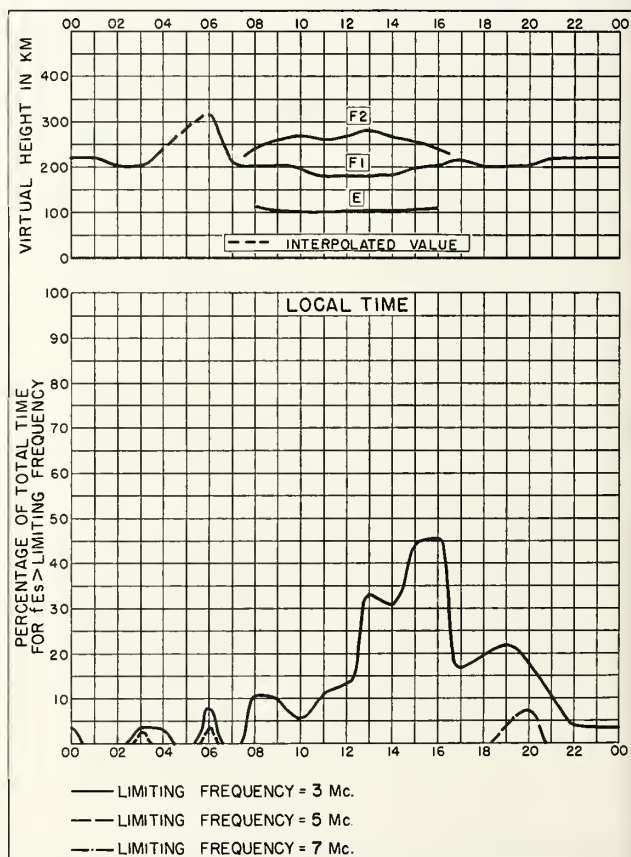


Fig. 84. SAO PAULO, BRAZIL AUGUST 1955

NBS 490

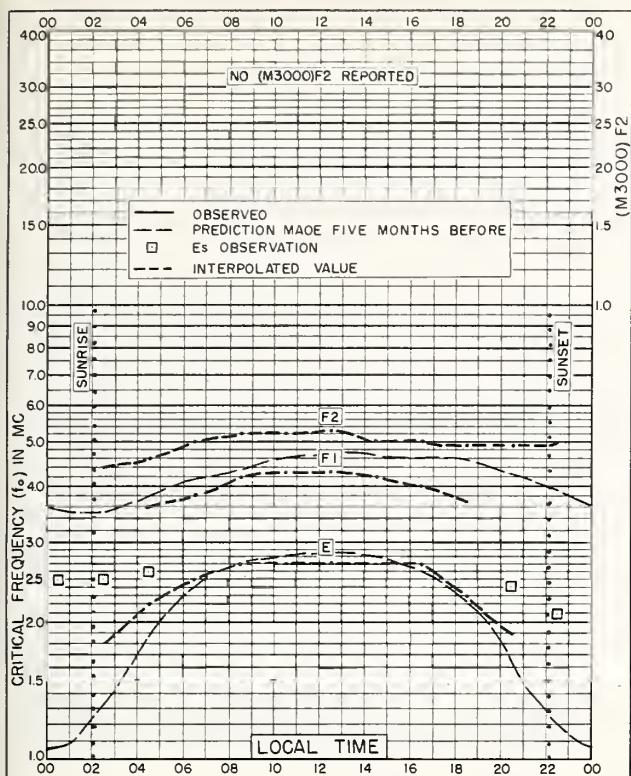


Fig. 85. LULEA, SWEDEN
65.6°N, 22.1°E

JULY 1955

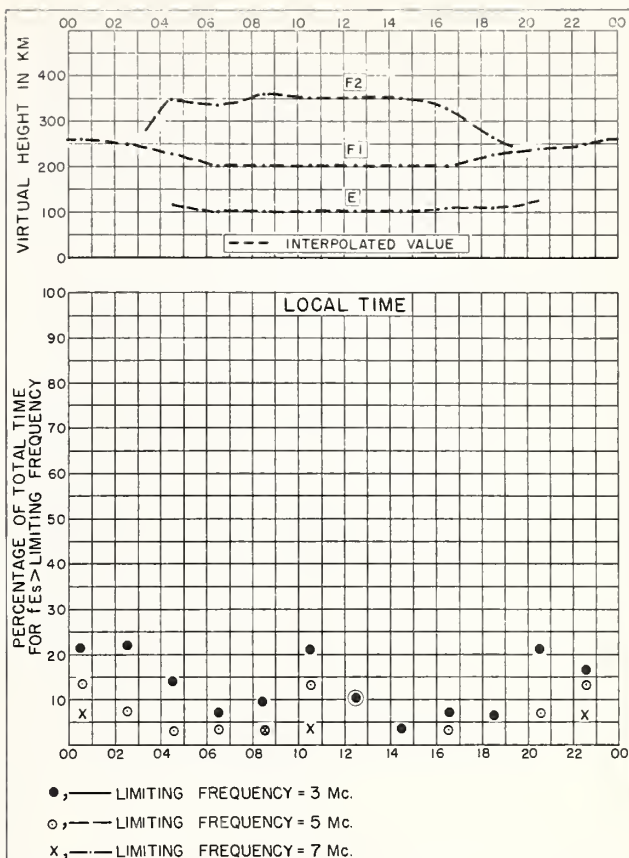


Fig. 86. LULEA, SWEDEN

JULY 1955

NBS 490

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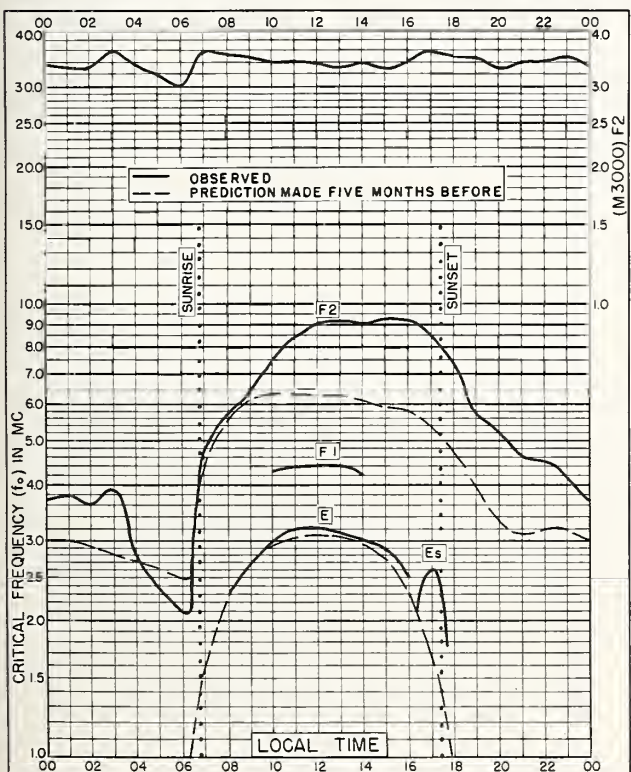


Fig. 87. SAO PAULO, BRAZIL
23.5°S, 46.5°W

JULY 1955

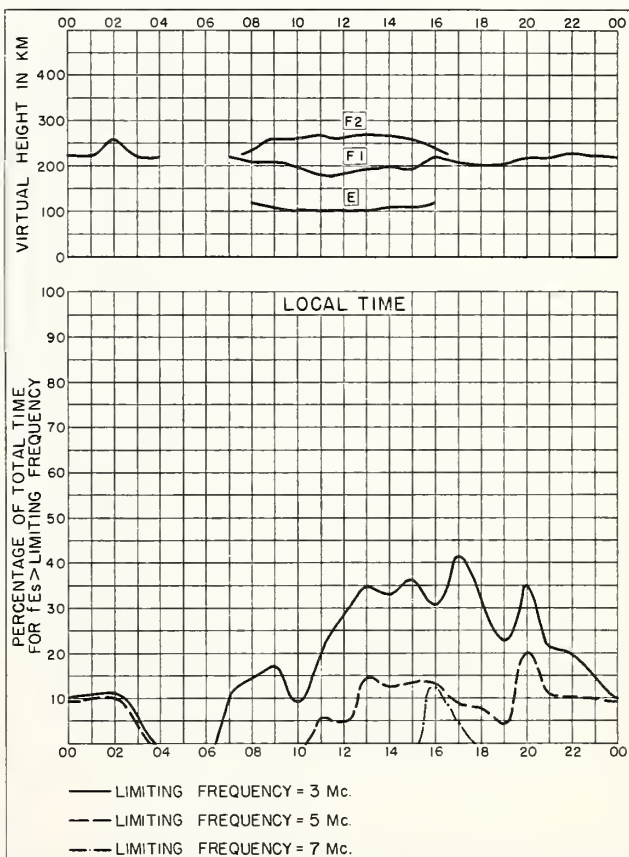


Fig. 88. SAO PAULO, BRAZIL

JULY 1955

NBS 490

U. S. GOVERNMENT PRINTING OFFICE: 1957

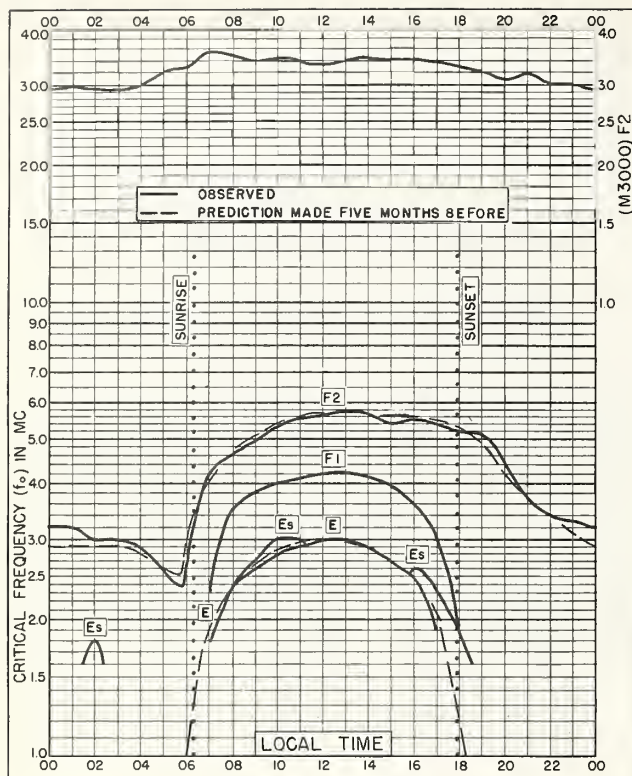


Fig. 89. POITIERS, FRANCE

46.6°N, 0.3°E

MARCH 1955

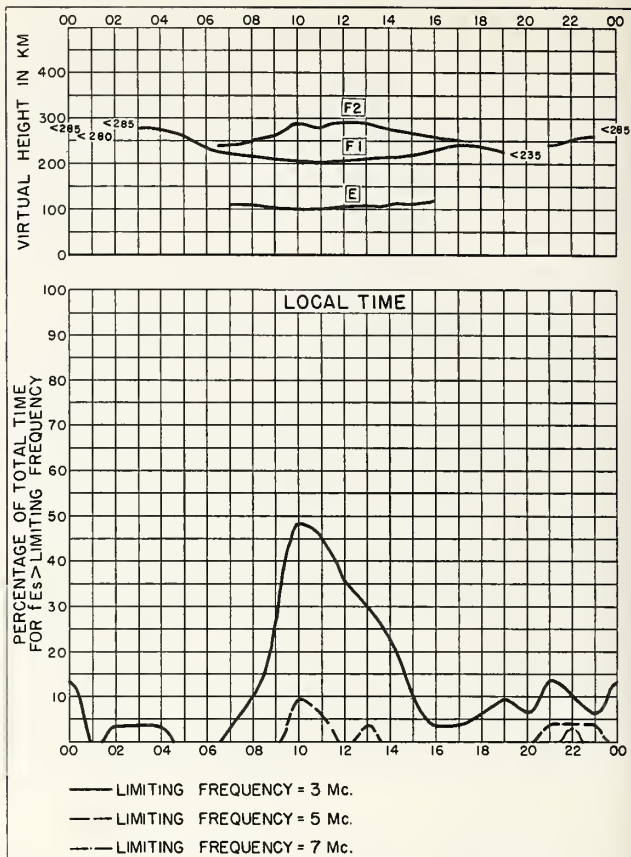


Fig. 90. POITIERS, FRANCE

MARCH 1955

NBS 490

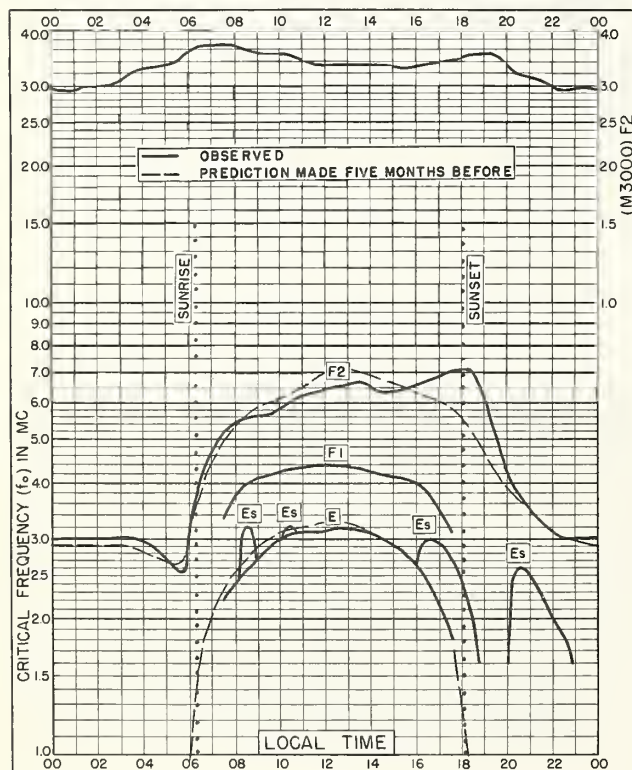


Fig. 91. CASABLANCA, MOROCCO

33.6°N, 7.6°W

MARCH 1955

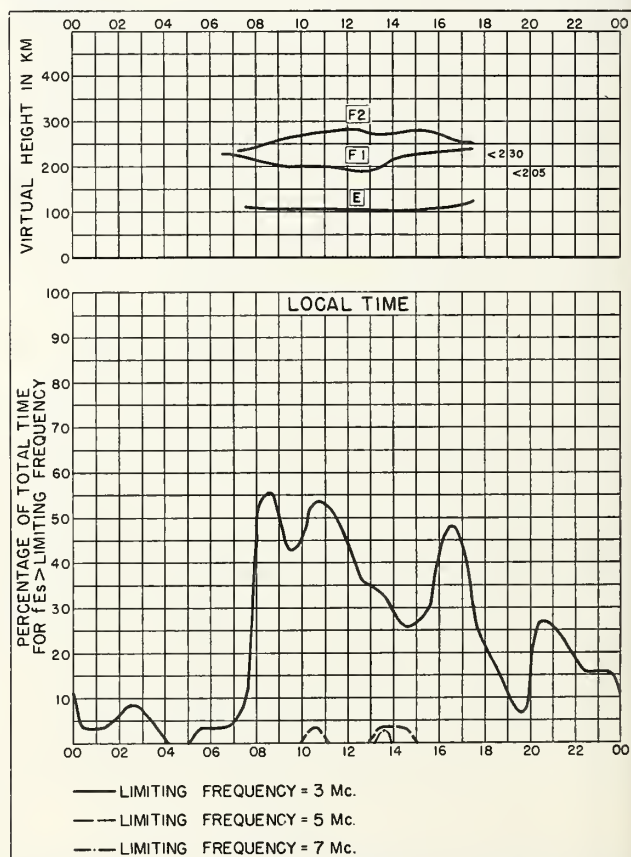


Fig. 92. CASABLANCA, MOROCCO

MARCH 1955

NBS 490

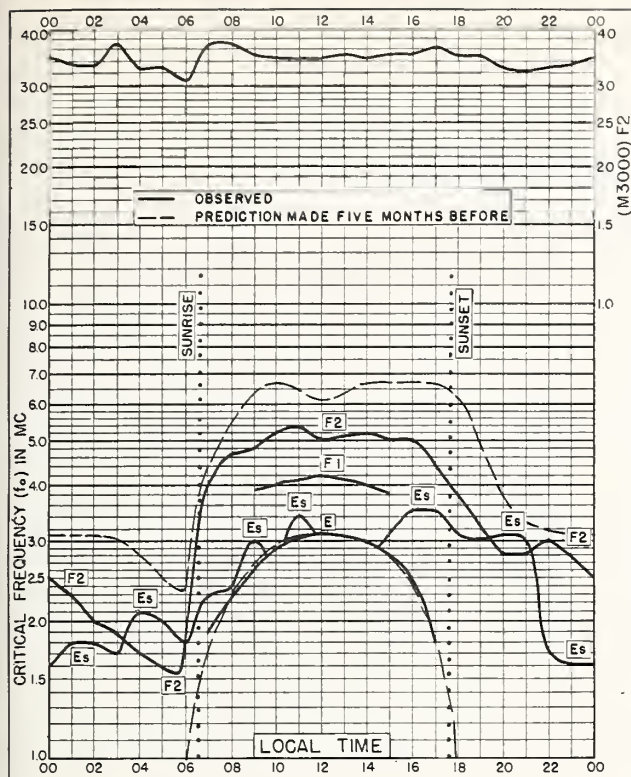


Fig. 93. TANANARIVE, MADAGASCAR
18.8°S, 47.8°E

JULY 1954

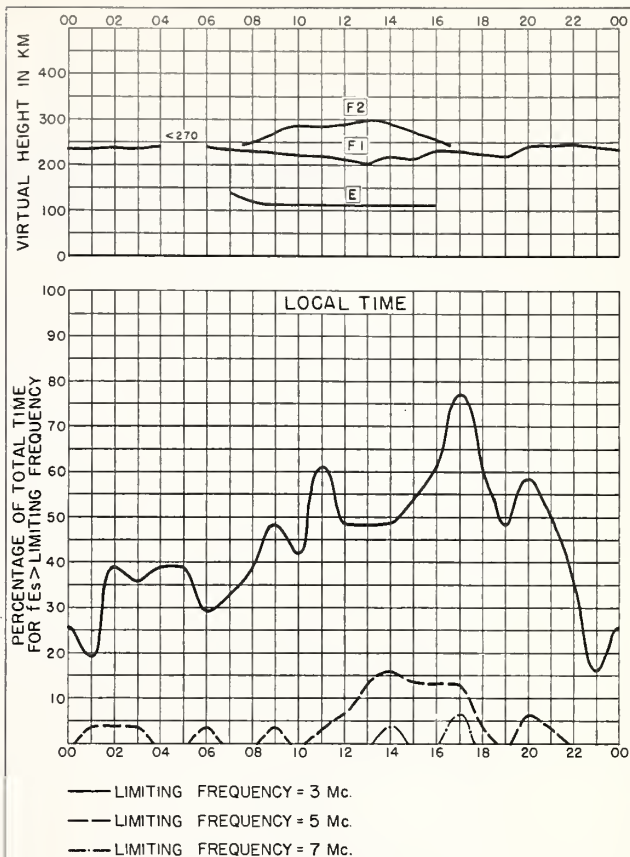


Fig. 94. TANANARIVE, MADAGASCAR JULY 1954

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 318877

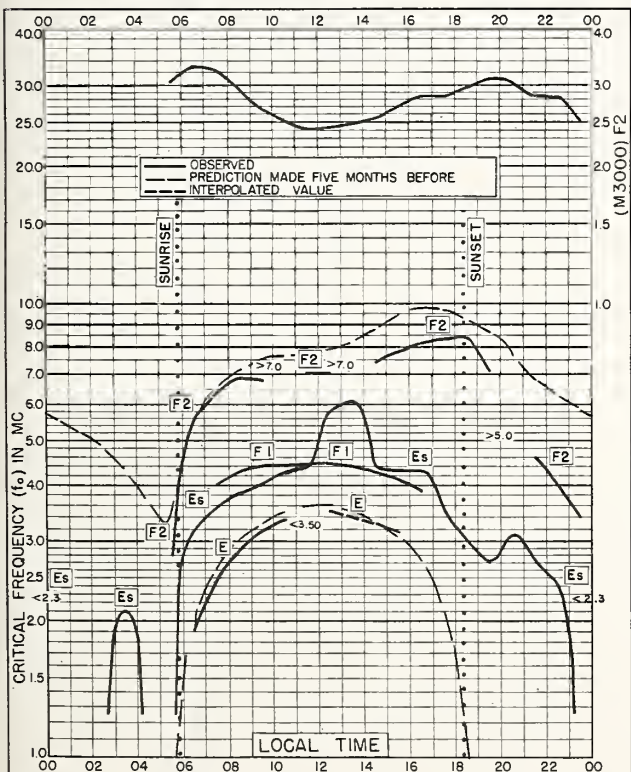


Fig. 95. DJIBOUTI, FRENCH SOMALILAND
11.5°N, 43.1°E

JULY 1953

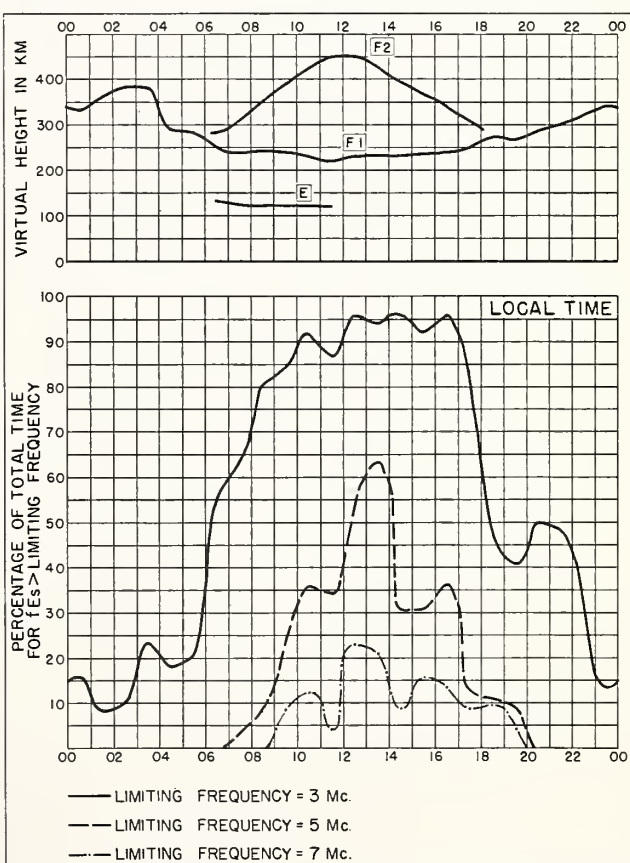


Fig. 96. DJIBOUTI, FRENCH SOMALILAND JULY 1953

NBS 490

U. S. GOVERNMENT PRINTING OFFICE 318877

Index of Tables and Graphs of Ionospheric Data
in CRPL-F145 (Part A)

	<u>Table page</u>	<u>Figure page</u>
Adak, Alaska		
July 1956	9	30
June 1956	11	35
Anchorage, Alaska		
May 1956.	12	39
Baguio, P. I.		
May 1956.	13	40
Budapest, Hungary		
March 1956.	14	45
February 1956	15	47
January 1956.	15	47
Buenos Aires, Argentina		
April 1956.	13	42
March 1956.	15	46
Casablanca, Morocco		
March 1955.	16	50
De Bilt, Holland		
June 1956	11	35
April 1956.	13	42
March 1956.	14	44
Decepcion I.		
April 1956.	14	43
Djibouti, French Somaliland		
July 1953	16	51
Fairbanks, Alaska		
May 1956.	12	38
Formosa, China		
June 1956	11	36
Ft. Monmouth, New Jersey		
July 1956	10	31
Graz, Austria		
July 1956	9	30
Huancayo, Peru		
June 1956	12	38
Lulea, Sweden		
July 1955	16	49
Maui, Hawaii		
July 1956	10	32
June 1956	11	36
Nairobi, Kenya		
March 1956.	15	46
Narsarssuak, Greenland		
July 1956	9	28
June 1956	11	34

Index (CRPL-F145 (Part A), concluded)

	<u>Table page</u>	<u>Figure page</u>
Okinawa I.		
July 1956	10	32
Oslo, Norway		
July 1956	9	29
Ottawa, Canada		
May 1956.	13	40
Panama Canal Zone		
July 1956	10	33
June 1956	12	37
Poitiers, France		
March 1955.	16	50
Puerto Rico, W. I.		
July 1956	10	33
June 1956	12	37
Reykjavik, Iceland		
June 1956	11	34
May 1956.	12	39
April 1956.	13	41
March 1956.	14	44
Sao Paulo, Brazil		
September 1955.	15	48
August 1955	15	48
July 1955	16	49
Tananarive, Madagascar		
July 1954	16	51
Thule, Greenland		
April 1956.	13	41
March 1956.	14	43
Upsala, Sweden		
July 1956	9	29
Washington, D. C.		
August 1956	9	28
White Sands, New Mexico		
July 1956	10	31
Winnipeg, Canada		
March 1956.	14	45



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